SPECIAL REPORT

Tobacco use among youth: a cross country comparison

The Global Youth Tobacco Survey Collaborative Group*

Tobacco Control 2002;**11**:252–270

Objective: The Global Youth Tobacco Survey (GYTS) is a worldwide collaborative surveillance initiative that includes governments and non-governmental organisations under the leadership of the World Health Organization/Tobacco Free Initiative (WHO/TFI) and the US Centers for Disease Control and Prevention/Office on Smoking and Health (CDC/OSH). The GYTS was developed to enhance the capacity of countries to design, implement, and evaluate tobacco control and prevention programmes.
Methods: The GYTS employs a standard methodology where self administered questionnaires, consisting of a set of core questions, are completed by a representative school based sample of students primarily between the ages of 13–15 years.
Results: Data are presented from 75 sites in 43 countries and the Gaza Strip/West Bank region. Current use of any tobacco product ranges from 62.8% to 3.3%, with high rates of oral tobacco use in certain regions. Current cigarette smoking ranges from 39.6% to less than 1%, with nearly 25% of students who smoke, having smoked their first cigarette before the age of 10 years. The majority of current smokers want to stop smoking and have already tried to quit, although very few students who currently smoke have ever attended a cessation programme. Exposure to advertising is high (75% of students had seen pro-tobacco ads), and exposure to environmental tobacco smoke (ETS) is very high in all countries. Only about half of the students reported that they had been taught in school about the dangers of smoking during the year preceding the survey.
Conclusions: Global youth tobacco use is already widespread throughout the world, but there is great variation among nations. Valid and reliable data on the extent of youth tobacco use, and correlates of use, are essential to plan and evaluate tobacco use prevention programmes. The GYTS has proven the feasibility of an inexpensive, standardised, worldwide surveillance system for youth tobacco use. The GYTS will be expanded to the majority of countries in the next few years, and can serve as a baseline for monitoring and evaluating global and national tobacco control efforts.

*See end of article for details of Global Youth Tobacco Survey Collaborative Group

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Received 8 February 2002.
Accepted 29 May 2002

Tobacco use is one of the major preventable causes of death in the world. The World Health Organization attributes over four million deaths a year to tobacco.[1] This figure is expected to rise to 10 million deaths a year by 2030, with 70% of these deaths occurring in developing countries.

While data on global tobacco use behaviour are limited, it appears that in many developed countries, the vast majority of smokers begin using tobacco products well before the age of 18 years[2 3] and that smoking rates are at or near historical high levels, although in some countries, there appears to be a recent plateau or decline.[4] Unfortunately, in the developing world there is very little information to describe the magnitude of the tobacco use problem, nor are there data systems which would allow for the characterisation of patterns of use. However, if the pattern seen in the developed world continues, a lifetime of tobacco use will result in the deaths of 250 million children and young people alive today, most of them in developing countries.[5] Because of the increasing levels of use and the dire public health implications, tobacco use among young people has been referred to as both a "paediatric disease"[6] and a "paediatric epidemic."[7] Many developed countries and at least one region, namely Europe which implements the Health Behavior in School-aged Children (HBSC) programme[8], have sophisticated youth behaviour surveillance systems, which include tobacco use. However, meaningful comparisons are difficult, if not impossible, as these systems use different methodologies. Of even greater concern is the dearth of youth tobacco use information in developing countries, which is necessary to document the extent of the problem and to formulate tobacco prevention and control programmes. To bridge this data gap and to promote tobacco control at the country, regional, and global levels, WHO's Tobacco Free Initiative (TFI), and the Centers for Disease Control and Prevention (CDC) Office on Smoking and Health (OSH) have developed the Global Youth Tobacco Survey (GYTS).

The GYTS uses a standardised methodology for constructing the sample frame, selecting schools and classes, preparing uniform questionnaires, and following consistent field procedures. The GYTS includes data on prevalence of cigarette and other tobacco use, perceptions and attitudes concerning tobacco use, as well as information on access, availability, and price; environmental tobacco smoke exposure (ETS); school curriculum; media and advertising; and cessation. These factors can provide important inputs to a country's comprehensive tobacco control programme.

The implementation of GYTS started in 1999.[9] This paper presents cross country comparisons for students aged 13–15 years from 75 sites in 43 countries and the Gaza Strip/West Bank region as of the end of 2001. It is expected that by the end of 2002, the GYTS will have been completed in over 100 countries.

METHODS

Sample selection

The GYTS is a school based survey of a defined geographic site that can be a country, a province, a city, or any other geographic entity. The following steps are followed for the sample selection.

Abbreviations: CDC, Centers for Disease Control and Prevention; ETS, environmental tobacco smoke; GYTS, Global Youth Tobacco Survey; HBSC, Health Behavior in School-aged Children; OSH, Office on Smoking and Health; TFI, Tobacco Free Initiative; WHO, World Health Organization

- First, because the GYTS focuses on students aged 13–15 years, the country research coordinator identifies the grades in their educational system that correspond to these ages.
- Second, the research coordinator prepares a database of schools that include the identified grades. Each school is designated a unique identifier to facilitate school selection. The number of students enrolled in each school grade to be surveyed is added to the database. This database forms the survey sample frame. The amount of work involved in creating this database varies from country to country. In some countries, the creation of the sampling frame was the most labourious and time consuming part of the GYTS (for example, the individual states in India).
- Third, the database is sent to the CDC, where the GYTS sample is drawn using a two stage cluster sample design. Schools are selected with probability proportional to school enrolment size during the first stage, and then classes within participating schools are selected as a systematic equal probability sample with a random start during the second stage. All students in the selected classes are eligible to participate in the survey. For this two stage sample design, statistical analysis conducted by CDC[10 11] has found that, for most sample designs, a minimum of 1500 completed student interviews is needed to obtain a precision level of ± 5% for a given estimate. WHO and CDC use this information to work with the countries to determine the sample size of schools and students for each site. The desired sample size is then adjusted for anticipated non-response at the school, class, and student levels. The very large samples of schools in South Africa, USA, and Philippines were done to provide regional or population subgroup estimates within the country.

GYTS questionnaire

The GYTS questionnaire is a self administered, school based instrument consisting of a "core" set of questions that are used by all countries, unless the information is not relevant in the country (for example, pro-cigarette advertising is not permitted in Singapore).* In addition, there is an optional set of questions from which a country can draw depending on its needs and priorities. The 2001 core questionnaire consists of 56 questions and includes items on the following topics: prevalence of tobacco use, age of initiation, exposure to tobacco advertising, perceptions and attitudes on behavioural norms with regard to tobacco use among young people, media and advertising, legislation, economics, school curriculum, and ETS. The 2001 core questionnaire differs from the 1999 and 2000 core GYTS questionnaire, by the addition of the economics questions and the deletion of the question on alcohol and/or drug use when last smoked cigarettes. Specific guidelines are followed for questionnaire translation into local languages and pilot testing. The final questionnaire is the responsibility of each participating country. This paper only includes data from the core questions.

Since classes were carefully identified to correspond to students 13–15 years of age, the majority of selected students were in this age group. However, all students in the selected classes were eligible to participate, without regard to their age, therefore there were some students who were younger than 13 years or older than 15 years. Because the objective of this paper is cross country comparisons of same aged children (13–15 years), respondents younger than 13 or older than 15 years have been excluded from the analysis.†

*The core 2001 GYTS questionnaire in English and example GYTS questionnaires in Arabic, French, and Spanish can be found at: http://www.cdc.gov/tobacco/global/GYTS/questionnaire/GYTS_samplequestionnaires.htm.

Survey administration procedures

WHO, CDC, and the research coordinators from the countries who participated in the 1999 surveys developed a GYTS research manual, which includes detailed procedures for administering the GYTS in schools. The manual is modified for each subsequent GYTS training to meet the specific needs of the countries in those trainings. The manual includes information on obtaining school participation, procedures for completing all survey forms, protocol in the classroom, and instructions for returning the completed forms to CDC for data processing. The GYTS uses a generic answer sheet, which allows for 99 questions, with eight response categories available per question. There are no open ended questions, no skip patterns, and no multiple response questions in the GYTS. The completed answer sheets are scanned through an optical reader. Edits for consistency and out-of-range responses are performed for each question. The quality of the GYTS data has been very high. Consistency failures or out-of-range responses rarely exceed 5% per question.

The GYTS is administered during one class period. GYTS administration procedures were designed to protect students' privacy by assuring that student participation was anonymous and voluntary. Before the survey was administered each country followed local procedures for obtaining parental permission and institutional review.

Analysis

The GYTS data are weighted to adjust for sample selection (school and class levels), non-response (school, class, and student levels), and post-stratification of the sample population relative to the grade and sex distribution in the total population. The computer program SUDAAN[12] was used to compute standard errors, 95% confidence intervals, and weighted prevalence estimates. The weighting factor consisted of the following formula:

$$W = W1 * W2 * f1 * f2 * f3 * f4$$

where

W1 = the inverse of the probability of selection for each school

W2 = the inverse of the probability of selection of each classroom within each selected school

f1 = a school level, non-response adjustment calculated by school enrolment size category (small, medium, large); school non-response is calculated within each tertile

f2 = a class level, non-response adjustment factor calculated for each school

f3 = a student level, non-response adjustment factor calculated by class

f4 = a post-stratification adjustment factor calculated by sex and grade.

Training and follow up

WHO and CDC developed the GYTS to enhance the capacity of countries to design, implement, and evaluate their tobacco prevention and control programmes. There are four phases to this capacity building process‡:

- First, the methodology and procedures for conducting the GYTS are taught to country research coordinators at regional workshops.

†In total, 66.2% of all students who participated in the GYTS from the countries included in this paper are age 13–15 years (table 1).
‡Details can be found at: http://www.cdc.gov/tobacco/global/GYTS

Table 1 Sample size and response rates: Global Youth Tobacco Survey 1999–2001

Country	Number of schools that participated	School response rate (%)	Number of students who participated	Student response rate (%)	Overall response rate	Number of students age 13–15 who participated	Per cent students age 13–15 (%)
AFRO							
Ghana 2000	50	100.0	1917	83.1	83.1	1088	56.8
Malawi							
Blantyre 2001	24	92.3	1308	85.2	78.6	783	60.0
Lilongwe 2001	25	100.0	1820	84.0	84.0	1083	59.5
Nigeria							
Cross River State 2001	45	90.0	2049	85.7	77.1	914	44.6
South Africa 1999	123	76.9	6045	85.5	65.7	2579	42.7
Zimbabwe							
Harare 1999	24	100.0	896	83.0	83.0	621	69.3
Manicaland 1999	33	100.0	1358	89.7	89.7	700	51.5
AMRO/PAHO							
Antigua & Barbuda 2000	27	100.0	1795	91.7	91.7	1183	65.9
Argentina							
Buenos Aires 2000	44	95.6	2254	88.5	84.7	1686	74.8
Bahamas 2000	23	92.0	1698	75.2	69.2	1174	69.1
Barbados 1999	18	94.7	1647	96.2	91.1	1317	80.0
Bolivia							
Cochabamba 2000	41	91.1	5270	86.8	79.1	4152	78.8
La Paz 2000	38	95.0	4639	83.7	79.5	3443	74.2
Santa Cruz 2000	44	88.0	4361	82.0	72.2	3234	74.2
Chile							
Coquimbo 2000	25	100.0	1746	92.1	92.1	1322	75.7
Santiago 2000	49	98.0	3150	86.0	84.3	2412	76.6
Valparaíso–Viña del Mar 2000	23	92.0	1452	86.8	79.8	1092	75.2
Costa Rica 1999	62	100.0	4623	90.4	90.4	3839	83.0
Cuba							
Havana 2001	25	100.0	1982	91.0	91.0	1376	69.4
Dominica 2000	23	100.0	1626	86.6	86.6	1004	61.7
Grenada 2000	37	92.5	3428	79.2	73.3	1807	52.7
Guyana 2000	43	86.0	906	72.1	62.0	603	66.6
Haiti							
Port-au-Prince 2001	20	80.0	1901	97.5	78.0	1039	54.7
Jamaica 2001	50	100.0	1742	86.5	86.5	1256	72.1
Mexico							
Monterrey 2000	48	96.0	1926	87.3	83.8	1517	78.8
Montserrat 2000	1	100.0	167	93.0	93.0	129	77.2
Peru							
Huancayo 2000	25	100.0	1351	92.4	92.4	1006	75.5
Lima 2000	48	98.0	1647	92.0	90.0	1217	75.0
Tarapoto 2000	13	100.0	1057	88.4	88.4	771	73.6
Trujillo 2000	23	95.8	1277	85.6	82.1	1026	81.1
St Lucia 2001	25	100.0	1737	86.2	86.2	1068	61.5
St Vincent & the Grenadines 2001	40	100.0	1511	78.4	78.4	1180	78.1
Suriname 2000	50	100.0	1788	84.5	84.5	797	44.6
Trinidad & Tobago 2000	53	88.3	2363	85.2	75.2	2115	79.5
USA 2000*	324	90.0	35828	93.4	84.1	16416	45.8
Uruguay							
Colonia 2001	4	100.0	682	90.0	90.0	473	69.4
Maldonado 2001	12	100.0	1157	87.0	87.0	815	70.4
Montevideo 2001	48	96.0	1849	85.6	82.1	1320	71.4
Rivera 2001	10	100.0	1137	83.1	83.1	805	70.8
Venezuela 1999	96	93.2	3767	99.7	92.9	2237	59.4
Virgin Islands (Am.) 2001*	43	89.6	2607	86.5	77.5	1188	45.6
EMRO							
Gaza Strip and West Bank							
Gaza Strip 2001	25	100.0	2906	95.8	95.8	1940	66.8
North West Bank 2001	25	100.0	2853	95.5	95.5	1324	46.4
Middle West Bank 2001	25	100.0	2880	93.6	93.6	1538	53.4
South West Bank 2001	24	96.0	2641	95.4	91.6	1525	57.7
Jordan 1999	91	91.0	3912	92.2	83.9	2847	72.8
EURO							
Poland							
Urban 1999	57	87.7	1567	83.6	73.3	1297	81.4
Rural 1999	60	92.3	1642	82.9	76.5	1525	89.7
Russian Federation							
Moscow 1999	99	99.0	4091	86.0	85.2	3157	77.2
Ukraine							
Kiev 1999	100	100.0	4156	81.4	81.4	2706	65.1
SEARO							
India							
Assam 2001	50	100.0	2177	86.8	86.8	2143	98.4
Arunachal Pradesh 2001	25	100.0	2314	90.6	90.6	2189	94.6
Bihar 2000	50	100.0	2636	70.1	70.1	1958	74.3
Goa 2000	49	98.0	2256	94.3	92.5	1599	70.9
Maharashtra 2000	50	100.0	2356	78.6	78.6	1547	65.7
Manipur 2001	24	100.0	1743	84.3	84.3	1667	95.6

Table 1 continued

Country	Number of schools that participated	School response rate (%)	Number of students who participated	Student response rate (%)	Overall response rate	Number of students age 13–15 who participated	Per cent students age 13–15 (%)
Meghalay 2001	24	96.0	2080	84.7	81.3	1972	94.8
Mizoram 2001	25	100.0	2295	83.6	83.6	2194	95.6
Nagaland 2001	25	100.0	2221	80.4	80.4	2109	95.0
Sikkim 2001	25	100.0	2236	85.4	85.4	2223	99.4
Tamil Nadu 2000	99	99.0	4820	90.1	89.2	3490	72.4
Tripura 2001	23	92.0	1866	87.3	80.3	1854	99.4
West Bengal 2000	71	94.7	3669	88.3	83.6	1845	74.8
Indonesia							
Jakarta 2000	50	100.0	2074	91.6	91.6	1490	71.8
Nepal 2001	49	98.0	2307	85.9	84.1	1167	50.6
Sri Lanka 1999	84	85.7	2896	89.0	76.3	2500	86.3
WPRO							
China							
Chongqing 1999	44	89.8	2409	94.5	84.9	2279	94.6
Guangdong 1999	45	93.8	2882	98.2	92.1	2725	94.6
Shandong 1999	48	98.0	3794	92.6	90.7	3328	87.7
Tianjin 1999	49	100.0	2893	96.8	96.8	2437	84.2
Fiji 1999	44	86.3	1629	88.1	75.9	1331	81.7
Northern Mariana Islands 2000*	22	68.8	2809	80.3	55.2	1308	46.6
Palau 2000*	24	100.0	1889	90.6	90.6	822	43.5
Philippines 2000	135	90.0	11630	88.7	79.8	5582	48.0
Singapore 2000	72	90.0	13111	93.3	84.0	9064	69.3

*Participated in US Youth Tobacco Survey that includes grades 6–12. Values for this paper only include ages 13–15 years from that total.
WHO regional offices: AFRO, Regional Office for Africa; AMRO/PAHO, Regional Office for the Americas/Pan American Health Organization; EMRO, Regional Office for the Eastern Mediterranean; EURO, Regional Office for Europe; SEARO, Regional Office for South-East Asia; WPRO, Regional Office for the Western Pacific.

- Second, upon completion of their GYTS, country research coordinators participate in a workshop which focuses on data analysis, report writing, and dissemination.
- Third, regional programme development workshops are held to assist countries in identifying potential programmes and interventions that can be included in their tobacco control programme.
- Fourth, ongoing technical assistance is provided to countries by WHO and CDC as the countries implement programmes, conduct repeat GYTS, and evaluate their programme's effectiveness.[13]

RESULTS

This section presents cross country comparisons for students aged 13–15 years across the 75 sites in 43 countries and the Gaza Strip/West Bank region, including core questions in each topic area. The number of sites included for each topic may vary for two reasons: (1) some sites did not ask all of the core questions; and (2) in some sites the student sample size for a given table cell was less than 35 cases, which is considered statistically unstable.

Response rate

Table 1 shows the school, student, and overall response rates for each country or site within each country. The school response rate ranged from 100% to 68.8% (median 98.0%); the student response rate ranged from 99.7% to 70.1% (median 86.8%); and the overall response rate (school rate * student rate) ranged from 96.8% to 55.2% (median 84.1%). The number of students aged 13–15 years who completed the GYTS by country/site ranged from 129 in Montserrat (only one school was open on the island because of volcanic activity) to 16 416 in the USA. In total, over 230 000 students in nearly 3 500 schools have completed the GYTS.

Prevalence

Ever smoked cigarettes§

The overall median per cent of students who had ever smoked cigarettes, even one or two puffs, was 33.0% (table 2). The highest per cent who ever smoked cigarettes was in the Northern Mariana Islands (79.8%), and the lowest in Tamil Nadu, India (3.4%). Over 70% of students reported having ever smoked cigarettes in three of the 75 sites (Santiago, Chile; Kiev, Ukraine; and Northern Mariana Islands) and 50% reported having ever smoked in 18 sites. Only five sites reported ever smoking rates less than 10% (four states in India and Nepal).

Age of initiation

The overall median per cent of students who ever smoked cigarettes, who smoked their first cigarette before age 10 years, was 23.9% (table 2). Manipur, India (87.8%) had the highest rate of smoking initiation before age 10, and the lowest was Buenos Aires, Argentina (6.1%). A total of eight sites, all in India, reported that of the students who smoked, more than half smoked their first cigarette before the age of 10 years. Only five sites reported a prevalence of under 10% for students smoking their first cigarette before the age of 10 years.

Current any tobacco use

The overall median per cent of current use of any tobacco product (smoked cigarettes or used other tobacco products on one or more days in the 30 days preceding the survey) was 18.7% (table 2). The highest per cent currently using any tobacco product was in the Nagaland, India (62.8%), and the lowest in Goa, India (3.3%). Over 50% of the students reported current use of any tobacco product in six states in India; Northern Mariana Islands; and Palau. Less than 10% of the students currently used any tobacco product in nine of the 75 sites (Virgin Islands (Am.); three states in India; Nepal; Sri Lanka; Shandong and Tianjin, China; and Singapore).

§Cigarettes—manufactured and "roll-your-own" cigarettes (tobacco wrapped in paper).[14] GYTS question: "Have you ever tried or experimented with cigarette smoking, even one or two puffs?"

Table 2 Prevalence—percentage of students age 13–15 years who used tobacco: Global Youth Tobacco Survey 1999–2001

Country	All students				Ever smokers, smoked first cigarette before age 10	Current smokers, smoke > 6 cigarettes per day
	Ever smoked cigarettes, even one or two puffs	Currently use any tobacco product	Currently smoke cigarettes	Currently use other tobacco products		
Overall median	33.0	18.7	13.9	8.8	23.9	9.4
AFRO						
Ghana 2000	10.2 (2.8)	16.8 (3.5)	4.2 (1.7)	14.5 (3.4)	39.8 (13.2)	11.2 (11.2)
Malawi						
Blantyre 2001	15.0 (7.1)	16.7 (3.4)	2.4 (2.2)	14.7 (2.8)	46.6 (11.3)	†
Lilongwe 2001	18.9 (5.2)	16.9 (3.2)	6.1 (1.9)	12.9 (2.1)	44.2 (8.6)	5.9 (6.7)
Nigeria						
Cross River State 2001	14.6 (5.4)	18.1 (3.9)	7.0 (3.0)	14.0 (3.2)	25.8 (7.0)	22.6 (14.6)
South Africa 1999	44.2 (6.0)	24.3 (3.0)	17.6 (2.5)	11.8 (3.4)	19.9 (3.2)	14.6 (4.7)
Zimbabwe						
Harare 1999	26.5 (5.6)	18.0 (5.0)	10.7 (3.4)	9.5 (3.4)	27.3 (7.2)	10.6 (7.0)
Manicaland 1999	20.4 (4.7)	18.5 (4.9)	10.0 (3.7)	13.2 (4.5)	31.2 (12.8)	11.9 (7.6)
AMRO/PAHO						
Antigua & Barbuda 2000	22.0 (3.3)	13.0 (2.4)	4.9 (1.5)	9.6 (2.2)	26.0 (5.4)	1.8 (3.4)
Argentina						
Buenos Aires 2000	55.1 (3.9)	28.1 (3.4)	25.3 (3.6)	7.0 (1.1)	6.1 (2.2)	20.5 (4.1)
Bahamas 2000	28.9 (3.2)	16.0 (2.6)	7.1 (1.9)	11.8 (2.2)	24.6 (7.1)	7.6 (6.3)
Barbados 1999	34.7 (6.1)	16.9 (3.9)	10.8 (4.0)	9.0 (2.2)	25.0 (4.3)	9.7 (10.6)
Bolivia						
Cochabamba 2000	50.3 (4.6)	24.6 (2.8)	20.8 (2.8)	9.0 (1.7)	14.7 (2.0)	4.9 (1.9)
La Paz 2000	52.4 (4.0)	27.3 (3.0)	23.2 (2.9)	9.8 (1.6)	11.8 (1.7)	4.3 (1.5)
Santa Cruz 2000	53.6 (3.2)	27.4 (1.8)	22.9 (2.0)	8.8 (1.4)	16.3 (3.2)	4.1 (2.0)
Chile						
Coquimbo 2000	69.6 (6.8)	40.2 (5.6)	39.6 (6.4)	6.4 (1.1)	11.9 (2.1)	4.4 (2.6)
Santiago 2000	71.5 (3.7)	38.3 (3.7)	38.4 (3.7)	6.6 (1.1)	15.8 (2.6)	5.6 (1.7)
Valparaíso—Viña del Mar 2000	68.4 (4.2)	35.3 (6.7)	36.1 (6.0)	5.3 (2.2)	15.8 (3.4)	4.5 (2.8)
Costa Rica 1999	44.4 (2.8)	20.8 (2.0)	17.8 (2.1)	6.4 (0.9)	10.9 (1.5)	13.8 (4.1)
Cuba						
Havana 2001	33.9 (6.8)	19.2 (3.3)	14.9 (3.6)	6.1 (1.2)	10.1 (3.8)	9.3 (4.5)
Dominica 2000	31.5 (4.3)	19.3 (3.2)	11.6 (2.8)	10.7 (2.3)	22.5 (6.6)	5.8 (5.2)
Grenada 2000	26.9 (3.4)	14.4 (1.9)	8.3 (1.7)	8.7 (1.8)	32.4 (5.0)	7.3 (5.2)
Guyana 2000	26.9 (6.3)	15.3 (3.9)	8.2 (3.1)	8.4 (2.2)	38.2 (9.6)	8.8 (9.1)
Haiti						
Port-au-Prince 2001	25.7 (7.8)	20.7 (4.8)	12.7 (3.8)	10.7 (4.6)	15.9 (6.2)	3.7 (5.4)
Jamaica 2001	33.0 (4.6)	19.3 (3.6)	15.8 (3.4)	7.8 (1.8)	36.0 (5.8)	3.9 (3.2)
Mexico						
Monterrey 2000	52.0 (4.5)	21.7 (3.1)	19.0 (3.0)	7.3 (1.6)	11.9 (3.3)	6.2 (2.9)
Montserrat 2000	20.6 (10.9)	12.5 (7.8)	5.6 (7.5)	9.4 (5.2)	†	†
Peru						
Huancayo 2000	47.1 (6.0)	20.1 (3.9)	15.6 (3.7)	7.6 (2.1)	18.1 (4.7)	3.1 (2.6)
Lima 2000	54.6 (4.8)	21.8 (3.4)	18.6 (3.5)	6.3 (1.9)	13.5 (2.5)	2.6 (2.2)
Tarapoto 2000	42.5 (6.7)	17.5 (3.0)	14.3 (3.3)	5.6 (2.1)	10.9 (3.6)	1.0 (1.9)
Trujillo 2000	46.5 (7.3)	18.7 (2.6)	16.3 (3.6)	5.3 (1.8)	12.3 (3.3)	4.2 (3.2)
St Lucia 2001	34.7 (2.6)	13.4 (2.8)	9.5 (2.4)	7.1 (2.1)	31.2 (5.8)	10.9 (8.2)
St Vincent & the Grenadines 2001	32.6 (3.6)	13.8 (2.6)	13.8 (2.6)	NA	35.0 (6.2)	6.6 (5.3)
Suriname 2000	48.3 (5.4)	14.3 (3.2)	10.8 (3.1)	6.0 (1.7)	23.8 (6.0)	15.9 (16.2)
Trinidad & Tobago 2000	37.9 (3.0)	14.3 (1.3)	12.0 (1.3)	4.8 (1.0)	19.3 (4.0)	2.2 (1.8)
USA 2000	49.5 (2.2)	23.1 (1.7)	17.7 (1.5)	14.5 (1.3)	23.6 (2.0)	21.5 (2.2)
Uruguay						
Colonia 2001	38.9 (8.1)	18.6 (6.2)	16.3 (6.6)	6.5 (3.0)	6.9 (4.5)	17.1 (7.8)
Maldonado 2001	54.3 (4.8)	24.1 (3.4)	21.0 (3.5)	8.4 (2.3)	9.7 (2.6)	18.5 (6.3)
Montevideo 2001	57.4 (4.6)	29.9 (3.9)	26.5 (3.7)	10.2 (2.1)	8.6 (2.3)	16.8 (6.2)
Rivera 2001	49.0 (4.6)	23.1 (3.7)	21.0 (3.6)	7.3 (2.0)	9.6 (3.4)	16.7 (6.4)
Venezuela 1999	21.9 (3.2)	14.8 (2.3)	7.4 (1.7)	8.7 (1.5)	12.1 (3.7)	4.0 (2.8)
Virgin Islands (Am.) 2001	25.3 (3.0)	8.5 (1.7)	3.6 (1.2)	6.7 (1.5)	25.9 (7.6)	11.7 (8.4)
EMRO						
Gaza Strip and West Bank						
Gaza Strip 2001	35.5 (7.8)	10.4 (3.3)	9.0 (2.8)	5.5 (2.8)	26.1 (4.7)	12.8 (5.1)
North West Bank 2001	50.4 (8.4)	16.8 (6.0)	14.1 (5.9)	9.9 (3.7)	24.0 (4.7)	7.3 (3.7)
Middle West Bank 2001	47.6 (6.3)	17.9 (6.2)	14.7 (5.9)	11.2 (4.0)	20.4 (3.8)	16.9 (6.2)
South West Bank 2001	49.7 (7.3)	16.8 (3.7)	13.9 (3.6)	9.7 (2.5)	22.7 (2.8)	11.6 (1.8)
Jordan 1999	34.3 (4.0)	20.6 (3.2)	16.6 (2.9)	11.2 (2.2)	26.1 (3.5)	13.2 (3.1)
EURO						
Poland						
Urban 1999	66.5 (3.2)	30.3 (3.4)	25.0 (3.2)	11.4 (2.9)	25.2 (3.4)	27.6 (6.0)
Rural 1999	57.6 (4.5)	18.4 (2.7)	15.2 (2.6)	5.4 (1.4)	36.5 (4.0)	19.5 (5.7)
Russian Federation						
Moscow 1999	67.2 (2.7)	35.1 (2.5)	33.4 (2.8)	10.7 (1.3)	22.4 (1.9)	29.9 (3.8)
Ukraine						
Kiev 1999	73.6 (2.7)	34.6 (2.9)	33.9 (3.1)	6.8 (1.2)	26.6 (2.5)	NA
SEARO						
India						
Assam 2001	16.9 (4.1)	36.1 (5.5)	10.0 (3.2)	26.8 (5.1)	84.5 (6.3)	2.8 (3.0)
Arunachal Pradesh 2001	20.3 (2.3)	50.1 (5.6)	13.5 (2.9)	37.2 (5.9)	65.0 (10.0)	16.8 (6.4)

Table 2 continued

Country	All students				Ever smokers, smoked first cigarette before age 10	Current smokers, smoke > 6 cigarettes per day
	Ever smoked cigarettes, even one or two puffs	Currently use any tobacco product	Currently smoke cigarettes	Currently use other tobacco products		
Bihar 2000	19.5 (4.2)	59.9 (7.8)	13.9 (4.0)	46.7 (6.7)	39.5 (9.2)	2.3 (2.3)
Goa 2000	3.7 (1.0)	3.3 (1.3)	0.5 (0.3)	2.9 (1.1)	†	†
Maharashtra 2000	8.6 (2.7)	9.6 (2.6)	2.5 (1.2)	7.7 (2.1)	52.5 (14.9)	9.4 (10.0)
Manipur 2001	21.2 (3.2)	62.3 (13.4)	15.7 (3.6)	47.4 (10.6)	87.8 (9.7)	13.1 (6.0)
Meghalay 2001	17.9 (4.3)	43.9 (10.1)	11.0 (4.7)	33.9 (7.6)	53.6 (20.6)	9.1 (3.2)
Mizoram 2001	30.1 (2.7)	53.3 (4.3)	22.8 (3.3)	32.4 (3.5)	27.0 (6.7)	11.7 (5.2)
Nagaland 2001	28.5 (7.2)	62.8 (3.4)	18.8 (4.4)	45.5 (5.6)	54.4 (8.1)	10.7 (5.7)
Sikkim 2001	24.6 (3.6)	54.7 (5.0)	18.1 (4.2)	38.0 (4.5)	86.8 (3.9)	17.4 (14.9)
Tamil Nadu 2000	3.4 (0.9)	4.8 (1.0)	0.9 (0.4)	4.0 (0.9)	21.5 (12.0)	†
Tripura 2001	12.5 (5.4)	44.6 (10.1)	10.4 (5.0)	34.8 (8.9)	81.4 (13.2)	9.4 (7.1)
West Bengal 2000	9.8 (1.8)	11.5 (2.2)	3.1 (1.0)	8.6 (1.8)	12.0 (5.1)	8.2 (8.9)
Indonesia						
Jakarta 2000	46.7 (4.2)	22.0 (3.8)	21.8 (3.9)	2.5 (0.9)	19.0 (3.9)	3.0 (2.1)
Nepal 2001	6.5 (2.8)	7.8 (3.0)	2.6 (1.2)	5.9 (2.4)	23.1 (10.1)	†
Sri Lanka 1999	12.1 (2.9)	9.9 (1.5)	4.0 (1.4)	7.2 (1.1)	25.4 (8.7)	NA
WPRO						
China						
Chongqing 1999	30.1 (3.8)	14.6 (2.3)	6.3 (1.5)	9.6 (1.4)	39.2 (5.1)	7.1 (3.4)
Guangdong 1999	21.6 (1.7)	10.3 (1.2)	4.5 (1.0)	6.7 (1.0)	37.7 (4.9)	19.4 (9.6)
Shandong 1999	16.2 (4.0)	8.6 (1.7)	2.4 (0.9)	6.9 (1.6)	20.5 (7.7)	3.3 (3.6)
Tianjin 1999	21.6 (2.5)	9.7 (1.7)	5.7 (1.6)	4.9 (1.1)	27.3 (3.8)	10.8 (7.7)
Fiji 1999	32.8 (5.6)	15.1 (3.8)	10.4 (3.4)	7.9 (2.2)	21.6 (5.0)	6.8 (5.8)
Northern Mariana Islands 2000	79.8 (6.4)	62.4 (5.5)	39.2 (4.9)	52.7 (4.7)	31.0 (4.4)	16.0 (4.5)
Palau 2000	61.4 (4.6)	58.5 (3.6)	21.6 (3.5)	53.5 (3.5)	31.9 (6.1)	7.2 (4.4)
Philippines 2000	39.0 (3.3)	23.3 (2.4)	18.2 (2.5)	11.1 (1.2)	14.1 (3.0)	6.5 (2.4)
Singapore 2000	21.5 (1.4)	9.1 (1.1)	9.1 (1.1)	NA	22.7 (1.8)	21.3 (2.8)

( ) Data presented as 95% confidence intervals [SE*1.96].
*Smoked cigarettes or used other tobacco products on ⩾1 of the 30 days preceding the survey.
†Sample size <35.
NA, Not available, question was not asked

Current cigarette smoking

Current smoking was defined as having smoked on one or more days in the 30 days preceding the survey. The overall median rate for current cigarette smoking was 13.9% (table 2). The highest rate was found in Coquimbo, Chile (39.6%), and the lowest in Goa, India (0.5%). More than one third of students were current smokers in six sites (Coquimbo, Santiago, and Valparaiso, Chile; Moscow, Russian Federation; Kiev, Ukraine; and the Northern Mariana Islands); whereas less than 10% were current smokers in 24 of the 75 sites.

Current use of other tobacco products¶

Students were asked if they had used any form of tobacco other than cigarettes on one or more days in the 30 days preceding the survey. The overall median rate for current use of other tobacco products was 8.8% (table 2). The highest rate of use of other tobacco products was in Palau (53.5%), and the lowest in Jakarta, Indonesia (2.5%). Over one third of the students currently used other tobacco products in nine sites: seven states in India; Northern Mariana Islands; and Palau. Use of other tobacco products was less than 10% in 46 of the 73 sites.

Smoked six or more cigarettes per day

The overall median per cent of current cigarette smokers who, on the days they smoked, smoked six or more cigarettes per day was 9.4% (table 2), while the highest rate was in Moscow, Russian Federation (29.9%), and the lowest rate was in Tarapoto, Peru (1.0%). In six sites (Cross River State, Nigeria; Buenos Aires, Argentina; USA; urban Poland; Moscow, Russian Federation; and Singapore) over 20% of the students smoked six or more cigarettes per day; whereas less than 10% smoked six or more cigarettes per day in 37 of the 68 sites.

¶GYTS question: "During the past 30 days (one month), have you used any form of tobacco products other than cigarettes (for example, chewing tobacco, snuff, dip, cigars, cigarillos, little cigars, pipe)?"

Perceptions and attitudes

Students who smoke have more friends

The students were asked a series of questions regarding their perception and attitudes toward smoking (table 3). The overall median per cent of students who responded "boys who smoke have more friends" was 28.0%, with Sikkim, India (60.7%) reporting the highest rate, and Colonia, Uruguay (8.7%) the lowest. More than 30% of the students responded "boys who smoke had more friends" in 29 of the 71 sites, whereas this figure was less than 10% in three of the 71 sites (Buenos Aires, Argentina; Colonia, Uruguay; and Guangdong, China). When asked if students thought "girls who smoke have more friends" the overall median was 16.8%, the highest rate was in Sikkim, India (50.2%), and the lowest in Jakarta, Indonesia (3.9%). More than 30% of the students responded "girls who smoke had more friends" in six sites (Ghana; South Africa; three states in India; and Fiji), whereas this figure was less than 10% in 10 of the 71 sites, including all four sites in China.

Students who smoke are more attractive

Students were also asked if they thought "smoking makes boys look more attractive" and if "smoking makes girls look more attractive" (table 3). Overall, the median rate of students who responded "smoking makes boys look more attractive" was 13.5%, with the highest per cent in Manipur, India (64.0%), and the lowest in Blantyre, Malawi (2.1%). More than 30% of students thought smoking makes boys look more attractive in 12 sites (North and Middle West Bank; eight states in India; Sri Lanka; and Shandong, China), whereas less than 10% responded "smoking makes boys look more attractive" in 17 of the 71 sites. Overall, the median rate who

Table 3 Perceptions and attitudes: Global Youth Tobacco Survey 1999–2001

Country	Think boys who smoke have more friends	Think girls who smoke have more friends	Think smoking makes boys look more attractive	Think smoking makes girls look more attractive
Overall median	28.0	16.8	13.5	10.0
AFRO				
Ghana 2000	41.1 (5.0)	30.1 (5.2)	15.4 (3.5)	12.9 (3.4)
Malawi				
Blantyre 2001	41.6 (4.9)	21.1 (4.2)	2.1 (1.5)	2.7 (1.5)
Lilongwe 2001	48.8 (5.2)	20.3 (3.4)	2.3 (1.2)	2.6 (1.5)
Nigeria				
Cross River State 2001	42.5 (4.6)	26.9 (4.0)	14.9 (2.7)	13.5 (2.9)
South Africa 1999	48.1 (6.2)	30.7 (4.0)	20.0 (3.9)	13.6 (3.3)
Zimbabwe				
Harare 1999	43.1 (5.8)	23.3 (3.9)	13.2 (4.4)	8.2 (3.7)
Manicaland 1999	43.8 (3.7)	18.6 (2.8)	23.1 (3.5)	12.7 (2.9)
AMRO/PAHO				
Antigua & Barbuda 2000	26.9 (2.7)	14.5 (2.3)	6.6 (1.7)	5.5 (1.5)
Argentina				
Buenos Aires 2000	9.2 (2.5)	9.1 (2.1)	12.4 (2.0)	7.9 (1.5)
Bahamas 2000	35.7 (3.4)	15.4 (3.0)	8.3 (1.9)	4.2 (1.5)
Barbados 1999	26.3 (2.9)	15.4 (3.5)	5.0 (1.1)	3.8 (1.0)
Bolivia				
Cochabamba 2000	17.6 (2.0)	15.9 (2.0)	15.3 (1.8)	10.9 (1.4)
La Paz 2000	18.2 (2.1)	17.4 (2.0)	13.8 (1.7)	12.0 (1.6)
Santa Cruz 2000	16.8 (2.8)	14.1 (1.9)	15.4 (1.5)	11.2 (1.6)
Chile				
Coquimbo 2000	18.2 (4.1)	16.6 (3.5)	12.6 (2.1)	8.4 (2.3)
Santiago 2000	16.0 (2.4)	16.8 (2.0)	12.9 (2.1)	9.3 (1.5)
Valparaíso–Viña del Mar 2000	20.8 (3.0)	18.1 (2.5)	8.9 (1.6)	8.2 (2.2)
Costa Rica 1999	18.4 (1.6)	14.9 (1.6)	5.5 (0.7)	2.4 (0.6)
Cuba				
Havana 2001	10.3 (1.7)	8.8 (2.1)	10.6 (1.7)	7.3 (1.4)
Dominica 2000	33.6 (3.4)	18.0 (2.7)	11.6 (2.2)	8.2 (1.8)
Grenada 2000	26.3 (3.1)	16.8 (2.6)	8.4 (1.6)	6.4 (1.7)
Guyana 2000	29.8 (5.8)	15.2 (3.4)	7.3 (2.8)	5.8 (1.9)
Haiti				
Port-au-Prince 2001	15.9 (4.1)	13.3 (4.1)	25.4 (4.0)	24.0 (4.0)
Jamaica 2001	31.5 (4.4)	17.0 (3.2)	8.6 (2.0)	7.4 (2.1)
Mexico				
Monterrey 2000	13.5 (1.8)	11.4 (1.8)	12.6 (2.2)	8.1 (1.7)
Montserrat 2000	28.0 (7.0)	14.1 (5.7)	2.4 (1.8)	1.6 (1.9)
Peru				
Huancayo 2000	13.2 (2.5)	11.9 (2.6)	11.1 (3.0)	10.2 (2.5)
Lima 2000	12.9 (2.6)	13.0 (2.5)	10.1 (2.1)	9.3 (2.1)
Tarapoto 2000	13.6 (2.5)	10.2 (2.4)	11.1 (2.8)	9.5 (3.3)
Trujillo 2000	14.5 (2.6)	14.1 (1.9)	10.6 (2.1)	9.6 (2.8)
St Lucia 2001	36.4 (3.3)	19.9 (3.4)	10.6 (3.2)	8.4 (3.0)
St Vincent & the Grenadines 2001	29.0 (3.0)	18.4 (1.8)	6.5 (1.7)	6.5 (1.5)
Suriname 2000	29.0 (4.2)	21.5 (3.2)	26.5 (5.6)	13.8 (4.1)
Trinidad & Tobago 2000	32.4 (2.9)	18.6 (2.2)	13.5 (1.9)*	7.7 (1.5)*
USA 2000	NA	NA	NA	NA
Uruguay				
Colonia 2001	8.7 (2.4)	8.0 (3.0)	15.3 (3.1)	8.1 (2.9)
Maldonado 2001	10.7 (2.3)	11.3 (2.3)	11.3 (2.3)	6.8 (1.8)
Montevideo 2001	13.0 (1.7)	11.5 (2.2)	14.2 (2.7)	10.2 (1.8)
Rivera 2001	12.2 (2.8)	10.5(2.1)	16.3 (2.4)	10.0 (2.4)
Venezuela 1999	11.1 (1.5)	9.8 (1.5)	4.9 (0.9)	3.3 (0.7)
Virgin Islands (Am.) 2001	NA	NA	NA	NA
EMRO				
Gaza Strip and West Bank				
Gaza Strip 2001	32.9 (2.8)	18.0 (2.5)	27.9 (3.4)	30.1 (3.8)
North West Bank 2001	30.9 (3.1)	16.5 (2.2)	30.6 (2.6)	31.0 (3.0)
Middle West Bank 2001	31.1 (3.5)	17.6 (3.5)	31.0 (3.2)	29.8 (3.9)
South West Bank 2001	28.5 (2.7)	16.9 (3.0)	29.0 (2.4)	27.9 (3.1)
Jordan 1999	28.1 (2.5)	23.4 (2.0)	20.1 (2.1)	16.4 (1.9)
EURO				
Poland				
Urban 1999	22.4 (3.1)	15.6 (3.0)	6.4 (1.5)	2.8 (1.1)
Rural 1999	23.7 (2.1)	15.1 (2.0)	7.1 (1.3)	4.0 (1.1)
Russian Federation				
Moscow 1999	24.1 (1.8)	15.6 (1.3)	10.8 (1.5)	4.6 (1.0)
Ukraine				
Kiev 1999	25.2 (2.9)	15.6 (2.1)	11.3 (1.8)	4.5 (0.9)
SEARO				
India				
Assam 2001	36.3 (4.8)	29.3 (5.0)	43.6 (4.9)	30.1 (4.0)
Arunachal Pradesh 2001	31.4 (5.5)	26.2 (2.5)	48.3 (6.3)	26.6 (3.5)
Bihar 2000	29.4 (4.5)	21.2 (4.6)	27.6 (4.1)	25.1 (3.1)
Goa 2000	33.3 (3.7)	20.5 (2.8)	19.0 (3.3)	14.6 (3.2)
Maharashtra 2000	38.4 (4.6)	22.4 (3.7)	46.6 (6.4)	34.4 (4.8)

Table 3 continued

Country	Think boys who smoke have more friends	Think girls who smoke have more friends	Think smoking makes boys look more attractive	Think smoking makes girls look more attractive
Manipur 2001	32.5 (3.1)	30.4 (4.9)	64.0 (10.4)	30.7 (5.7)
Meghalay 2001	30.1 (4.7)	21.6 (3.5)	41.3 (10.8)	20.6 (5.4)
Mizoram 2001	46.2 (3.9)	32.8 (4.2)	15.0 (2.8)	12.9 (2.3)
Nagaland 2001	34.4 (6.8)	27.4 (3.8)	47.7 (9.5)	20.1 (3.3)
Sikkim 2001	60.7 (5.6)	50.2 (6.4)	59.8 (4.8)	42.0 (6.9)
Tamil Nadu 2000	30.0 (2.7)	17.0 (2.1)	16.6 (2.2)	15.8 (2.0)
Tripura 2001	28.0 (6.6)	23.9 (7.1)	52.9 (10.1)	29.9 (10.0)
West Bengal 2000	36.9 (4.4)	12.1 (2.3)	21.0 (2.5)	15.0 (2.3)
Indonesia				
Jakarta 2000	12.2 (1.7)	3.9 (1.1)	9.7 (2.0)	2.5 (1.0)
Nepal 2001	34.1 (3.2)	19.7 (2.8)	21.1 (4.7)	14.7 (3.8)
Sri Lanka 1999	49.8 (3.3)	20.0 (2.2)	43.3 (2.6)	26.9 (2.5)
WPRO				
China				
Chongqing 1999	16.9 (2.1)	7.3 (1.3)	25.1 (2.7)	15.1 (2.4)
Guangdong 1999	9.2 (1.4)	5.3 (1.1)	9.9 (1.2)	4.9 (1.0)
Shandong 1999	13.4 (1.3)	4.1 (0.9)	33.1 (3.3)	21.3 (2.9)
Tianjin 1999	13.6 (2.7)	5.3 (1.5)	22.9 (2.5)	13.3 (2.1)
Fiji 1999	49.5 (7.8)	34.0 (6.0)	13.1 (3.5)	11.3 (2.8)
Northern Mariana Islands 2000	NA	NA	NA	NA
Palau 2000	NA	NA	NA	NA
Philippines 2000	23.9 (2.1)	13.0 (1.5)	12.1 (1.7)	7.1 (1.2)
Singapore 2000	11.5 (1.0)	7.6 (0.8)	7.2 (0.7)	4.1 (0.6)

( ) Data presented as 95% confidence intervals [SE*1.96].
* Trinidad and Tobago question "Think smoking makes (boys/girls) look cool". NA, Not available, question was not asked.

responded "smoking makes girls look more attractive" was 10.0%, with the highest in Sikkim, India (42.0%), and the lowest in Montserrat (1.6%). More than 30% of students responded "smoking makes girls look more attractive" in six sites (Gaza Strip; North West Bank; and four states in India), whereas this figure was less than 10% in 35 of the 71 sites.

Access and availability

Students were asked questions regarding their access to cigarettes and the availability of cigarettes to them.** The overall median rate of students who currently smoke cigarettes who usually smoke at home was 22.2%, with Assam, India (71.6%) reporting the highest rate, and Moscow, Russian Federation (4.8%) the lowest (table 4). Over 50% of the students usually smoke at home in seven sites (Guyana; Port-au-Prince, Haiti; Jamaica; three states in India; and Tianjin, China) and less than 10% usually smoke at home in 11 of the 65 sites.

**Core GYTS questions and response categories are available at the following web site: http://www.cdc.gov/tobacco/global/GYTS/questionnaire/GYTS_samplequestionnaires.htm

Table 4 Access and availability: Global Youth Tobacco Survey 1999–2001

Country	Current smokers who usually smoke at home (%)	Current smokers who purchased cigarettes in a store (%)	Current smokers who bought cigarettes in a store who were not refused purchase because of their age (%)
Overall median	22.2	42.7	83.0
AFRO			
Ghana 2000	24.4 (14.0)	*	*
Malawi			
Blantyre 2001	*	*	*
Lilongwe 2001	30.4 (12.2)	17.6 (8.2)	*
Nigeria			
Cross River State 2001	22.2 (15.3)	41.9 (19.6)	*
South Africa 1999	18.8 (4.2)	54.8 (6.8)	77.2 (8.7)
Zimbabwe			
Harare 1999	25.2 (12.2)	47.6 (8.4)	*
Manicaland 1999	26.0 (10.7)	37.7 (13.3)	*
AMRO/PAHO			
Antigua & Barbuda 2000	33.5 (14.5)	11.8 (10.6)	*
Argentina			
Buenos Aires 2000	9.9 (2.3)	59.6 (4.9)	89.7 (4.9)
Bahamas 2000	35.0 (8.1)	21.7 (9.7)	NA
Barbados 1999	41.2 (7.5)	18.1 (8.4)	*
Bolivia			
Cochabamba 2000	11.0 (2.8)	55.2 (4.6)	79.8 (4.5)
La Paz 2000	11.0 (3.3)	56.7 (3.5)	78.1 (7.0)
Santa Cruz 2000	19.0 (3.8)	43.3 (6.5)	84.3 (10.9)
Chile			
Coquimbo 2000	9.1 (4.4)	60.4 (5.6)	90.4 (5.9)
Santiago 2000	14.1 (2.8)	61.5 (4.0)	89.6 (3.5)
Valparaíso—Viña del Mar 2000	14.7 (2.8)	57.3 (4.1)	85.1 (6.4)

Table 4 continued

Country	Current smokers who usually smoke at home (%)	Current smokers who purchased cigarettes in a store (%)	Current smokers who bought cigarettes in a store who were not refused purchase because of their age (%)
Costa Rica 1999	7.4 (2.6)	31.7 (4.8)	73.6 (5.8)
Cuba			
Havana 2001	20.5 (6.1)	41.0 (9.1)	90.3 (7.4)
Dominica 2000	28.0 (9.5)	20.8 (7.8)	*
Grenada 2000	41.7 (9.0)	16.2 (6.2)	*
Guyana 2000	65.2 (17.3)	25.6 (14.0)	*
Haiti			*
Port-au-Prince 2001	62.5 (18.8)	33.3 (16.2)	*
Jamaica 2001	51.4 (8.5)	35.0 (6.9)	73.2 (15.5)
Mexico			
Monterrey 2000	7.4 (3.0)	58.6 (5.9)	65.3 (8.5)
Montserrat 2000	*	*	*
Peru			
Huancayo 2000	7.7 (5.1)	59.3 (8.8)	89.8 (7.1)
Lima 2000	13.5 (5.0)	62.4 (6.0)	70.3 (8.5)
Tarapoto 2000	21.2 (9.0)	53.6 (10.2)	75.2 (13.0)
Trujillo 2000	9.5 (4.7)	59.9 (8.0)	87.2 (6.4)
St Lucia 2001	39.4 (11.3)	14.8 (8.7)	*
St Vincent & the Grenadines 2001	44.8 (9.8)	15.9 (5.8)	*
Suriname 2000	28.2 (13.0)	31.6 (11.3)	*
Trinidad & Tobago 2000	33.7 (7.9)	30.8 (6.9)	81.8 (11.0)
USA 2000	NA	9.6 (1.6)	61.2 (3.7)
Uruguay			
Colonia 2001	10.0 (4.3)	70.1 (8.0)	89.5 (8.4)
Maldonado 2001	16.3 (5.5)	54.4 (7.4)	76.5 (9.3)
Montevideo 2001	17.1 (3.3)	65.5 (5.5)	78.0 (4.3)
Rivera 2001	12.3 (6.9)	59.1 (8.4)	89.6 (8.3)
Venezuela 1999	27.8 (6.7)	46.2 (9.0)	89.3 (8.4)
Virgin Islands (Am.) 2001	NA	16.2 (10.3)	*
EMRO			
Gaza Strip and West Bank			
Gaza Strip 2001	18.7 (12.8)	36.8 (8.2)	*
North West Bank 2001	24.1 (11.3)	38.6 (11.9)	80.5 (11.3)
Middle West Bank 2001	16.4 (8.8)	35.2 (7.8)	84.1 (8.2)
South West Bank 2001	17.6 (7.1)	40.2 (7.1)	85.4 (8.9)
Jordan 1999	33.1 (9.1)	33.8 (7.5)	67.5 (12.4)
EURO			
Poland			
Urban 1999	6.6 (3.0)	51.8 (6.3)	73.7 (7.7)
Rural 1999	11.2 (4.8)	36.6 (5.8)	60.2 (10.4)
Russian Federation			
Moscow 1999	4.8 (1.3)	62.8 (3.7)	79.4 (3.9)
Ukraine			
Kiev 1999	6.7 (1.9)	38.5 (4.1)	92.2 (3.9)
SEARO			
India			
Assam 2001	71.6 (12.4)	73.9 (13.5)	98.1 (2.1)
Arunachal Pradesh 2001	38.6 (12.7)	57.6 (15.4)	94.7 (4.1)
Bihar 2000	29.4 (9.2)	54.5 (12.8)	74.4 (8.8)
Goa 2000	*	*	*
Maharashtra 2000	*	*	*
Manipur 2001	60.7 (13.0)	86.3 (8.9)	88.7 (15.6)
Meghalay 2001	44.3 (12.6)	57.3 (12.4)	84.6 (12.6)
Mizoram 2001	31.0 (4.8)	60.8 (4.6)	73.9 (12.0)
Nagaland 2001	47.6 (11.0)	53.1 (8.1)	85.8 (7.8)
Sikkim 2001	33.6 (8.0)	74.0 (11.3)	87.5 (8.9)
Tamil Nadu 2000	*	*	*
Tripura 2001	71.5 (21.0)	79.2 (15.2)	96.3 (4.3)
West Bengal 2000	5.5 (6.5)	56.3 (17.1)	*
Indonesia			
Jakarta 2000	8.1 (1.9)	68.6 (6.2)	71.7 (9.6)
Nepal 2001	*	*	*
Sri Lanka 1999	10.0 (5.4)	42.1 (17.7)	*
WPRO			
China			
Chongqing 1999	49.6 (11.2)	33.7 (9.8)	87.5(9.1)
Guangdong 1999	41.0 (11.3)	52.8 (10.2)	95.7 (5.0)
Shandong 1999	43.4 (6.8)	14.1 (8.8)	*
Tianjin 1999	56.5 (8.1)	32.9 (13.6)	95.0 (6.4)
Fiji 1999	14.5 (7.2)	34.7 (9.2)	67.2 (18.2)
Northern Mariana Islands 2000	NA	23.4 (4.6)	53.4 (9.1)
Palau 2000	NA	10.5 (5.5)	*
Philippines 2000	20.5 (3.4)	39.6 (4.2)	46.5 (7.7)
Singapore 2000	11.8 (2.2)	44.6 (3.3)	50.0 (5.4)

( ) Data presented as 95% confidence intervals [SE*1.96].
*Sample size <35. NA, Not available, question was not asked.

Table 5 Cessation: Global Youth Tobacco Survey 1999–2001

Country	Current smokers	
	Desire to stop	Tried to stop this year
Overall median	68.4	63.1
AFRO		
Ghana 2000	*	*
Malawi		
Blantyre 2001	*	*
Lilongwe 2001	*	*
Nigeria	*	*
Cross River State 2001		
South Africa 1999	69.1 (7.3)	74.6 (5.5)
Zimbabwe		
Harare 1999	*	*
Manicaland 1999	64.6 (8.9)	54.0 (19.3)
AMRO/PAHO		
Antigua & Barbuda 2000	*	*
Argentina		
Buenos Aires 2000	47.1 (6.9)	52.5 (7.7)
Bahamas 2000	*	*
Barbados 1999	43.4 (15.3)	63.5 (6.6)
Bolivia		
Cochabamba 2000	54.6 (5.5)	58.6 (6.7)
La Paz 2000	62.6 (5.0)	67.7 (6.3)
Santa Cruz 2000	70.9 (6.9)	58.8 (10.4)
Chile		
Coquimbo 2000	50.4 (7.0)	62.9 (5.7)
Santiago 2000	45.0 (3.10	59.0 (5.3)
Valparaíso—Viña del Mar 2000	48.0 (7.0)	56.9 (8.5)
Costa Rica 1999	57.8 (5.3)	63.0 (5.3)
Cuba		
Havana 2001	56.0 (13.4)	63.6 (12.2)
Dominica 2000	68.7 (13.3)	55.7 (13.2)
Grenada 2000	78.2 (10.6)	74.7 (8.2)
Guyana 2000	*	*
Haiti		
Port-au-Prince 2001	86.3 (15.2)	71.8 (18.8)
Jamaica 2001	79.8 (9.5)	70.6 (9.1)
Mexico		
Monterrey 2000	51.9 (6.9)	56.8 (6.2)
Montserrat 2000	*	60.0 (11.8)
Peru		
Huancayo 2000	69.3 (6.9)	68.1 (8.0)
Lima 2000	62.0 (9.9)	61.6 (8.5)
Tarapoto 2000	84.2 (9.2)	79.5 (9.2)
Trujillo 2000	79.5 (10.9)	78.7 (9.9)
St Lucia 2001	74.5 (13.2)	NA
St Vincent & the Grenadines 2001	77.7 (10.1)	82.9 (11.4)
Suriname 2000	79.3 (12.4)	72.7 (10.5)
Trinidad & Tobago 2000	71.7 (9.0)	76.0 (8.3)
USA 2000	55.8 (2.5)	58.2 (2.2)
Uruguay		
Colonia 2001	45.7 (14.6)	51.6 (18.5)
Maldonado 2001	53.7 (12.0)	57.4 (9.6)
Montevideo 2001	59.8 (7.5)	64.5 (5.4)
Rivera 2001	67.4 (11.0)	61.4 (11.0)
Venezuela 1999	69.8 (10.8)	68.4 (10.7)
Virgin Islands (Am.) 2001	*	*
EMRO		
Gaza Strip and West Bank		
Gaza Strip 2001	64.8 (16.4)	62.4 (16.0)
North West Bank 2001	68.9 (9.8)	74.0 (7.6)
Middle West Bank 2001	59.0 (14.7)	65.1 (6.6)
South West Bank 2001	52.5 (13.7)	57.3 (11.1)
Jordan 1999	40.4 (5.9)	78.3 (5.7)
EURO		
Poland		
Urban 1999	73.3 (7.8)	72.3 (5.0)
Rural 1999	80.9 (4.8)	80.1 (6.5)
Russian Federation		
Moscow 1999	69.2 (3.7)	76.1 (3.0)
Ukraine		
Kiev 1999	51.3 (3.1)	56.4 (4.0)
SEARO		
India		
Assam 2001	66.8 (26.0)	19.9 (15.2)
Arunachal Pradesh 2001	58.7 (16.2)	30.9 (17.1)
Bihar 2000	68.4 (12.3)	59.9 (12.9)
Goa 2000	*	*
Maharashtra 2000	*	*

Table 5 continued

Country	Current smokers	
	Desire to stop	Tried to stop this year
Overall median	68.4	63.1
Manipur 2001	19.6 (12.5)	10.0 (7.2)
Meghalay 2001	56.2 (17.7)	39.8 (25.9)
Mizoram 2001	84.7 (6.3)	79.1 (5.5)
Nagaland 2001	80.3 (10.4)	52.1 (13.9)
Sikkim 2001	27.3 (10.7)	8.4 (3.3)
Tamil Nadu 2000	*	*
Tripura 2001	32.9 (24.7)	10.7 (9.8)
West Bengal 2000	77.0 (18.9)	61.9 (14.9)
Indonesia		
Jakarta 2000	80.5 (7.3)	91.0 (4.2)
Nepal 2001	*	*
Sri Lanka 1999	79.0 (13.6)	42.9 (15.4)
WPRO		
China		
Chongqing 1999	72.4 (6.8)	63.2 (12.6)
Guangdong 1999	62.5 (12.8)	62.6 (10.6)
Shandong 1999	86.9 (13.6)	78.8 (15.3)
Tianjin 1999	86.9 (6.3)	68.2 (8.4)
Fiji 1999	78.0 (8.3)	78.9 (12.0)
Northern Mariana Islands 2000	80.7 (5.3)	76.8 (4.8)
Palau 2000	76.8 (11.3)	NA
Philippines 2000	85.2 (3.3)	83.1 (3.9)
Singapore 2000	61.9 (4.9)	78.1 (3.2)

( ) Data presented as 95% confidence intervals [SE*1.96].
*Sample size <35. NA, Not available, question was not asked.

Students who currently smoke cigarettes were also asked how they usually got their own cigarettes. Overall, the median rate for purchasing cigarettes in a store was 42.7% (table 4). Students in Manipur, India (86.3%) were the most likely to have purchased cigarettes in a store, with the least likely in the USA (9.6%). Over 50% of the students purchased their cigarettes in 30 of the 68 sites, while this figure was less than 10% only in the USA.

Students were asked if they had been refused the purchase of cigarettes in a store because of their age. Overall, for students who currently smoke cigarettes and who purchased their cigarettes in a store, the median rate for not being refused purchase was 83.0%. The site with the highest per cent not refused purchase was in Assam, India (98.1%), and the lowest was in the Philippines (46.5%). Over 70% of young people were not refused purchase because of their age in every site except eight (Monterrey, Mexico; USA; Jordan; rural Poland; Fiji; Northern Mariana Islands; Philippines; and Singapore).

Cessation

Students were asked if they wanted to stop smoking now and if they had tried to stop smoking in the year preceding the survey. The overall median per cent of current smokers who want to stop smoking now was 68.4% (table 5). Shandong and Tianjin, China had the highest per cent of current smokers who wanted to stop (86.9%), and Manipur, India (19.6%) had the lowest. Over 80% of current smokers wanted to stop smoking in 10 sites (Port-au-Prince, Haiti; Tarapoto, Peru; rural Poland; Mizoram and Nagaland, India; Jakarta, Indonesia; Shandong and Tianjin, China; Northern Mariana Islands; and the Philippines). Less than half of current smokers wanted to stop smoking in nine sites (Buenos Aires, Argentina; Barbados; Santiago and Valparaiso, Chile; Colonia, Uruguay; Jordan; and Manipur, Sikkim, and Tripura, India).

Almost two thirds of current smokers stated that they had tried to quit smoking during the year preceding the survey (median 63.1%) (table 5). Jakarta, Indonesia (91.0%) had the highest per cent of current smokers who had tried to quit during the past year, and Sikkim, India (8.4%) had the lowest. Over 80% of current smokers had tried to quit smoking in the past year in four of the 60 sites (St Vincent and the Grenadines; rural Poland; Jakarta, Indonesia; and Philippines), whereas less than 50% had tried to quit smoking in the past year in seven sites (six states in India and Sri Lanka).

Media and advertising

Anti-smoking

Students were asked two questions regarding the extent to which they had seen anti-smoking messages either in the media or at sporting/other events during the month preceding the survey. The overall median per cent who had seen any anti-smoking media message was 80.4% (table 6). The highest exposure to anti-smoking media messages was in Bihar, India (97.6%), and the lowest in Manipur, India (57.7%). Ninety per cent or more of students had seen anti-smoking media messages in 11 of the 74 sites. Less than 70% of students had seen anti-smoking media messages in only eight of the 74 sites (Ghana; Cross River State, Nigeria; Manicaland, Zimbabwe; Buenos Aires, Argentina; Port-au-Prince, Haiti; North West Bank; and Manipur and Nagaland, India).

The overall median per cent of students who had seen anti-smoking messages at sporting/other events was 76.2% (table 6). The highest exposure to anti-smoking messages at sporting/other events was in Manipur, India (95.0%) and the lowest in West Bengal, India (35.7%). Over 90% of students had seen anti-smoking messages at sporting/other events in nine of the 71 sites (six states in India; Jakarta, Indonesia; Guangdong, China; and Singapore). Less than 70% of students had seen anti-smoking messages at sporting/other events in 17 of the 71 sites.

Pro-smoking

Students were asked about their exposure to pro-cigarette ads during the month preceding the survey on billboards, in newspapers/magazines, and at sporting/other events. The overall median per cent of students who had seen ads for cigarettes on billboards was 78.3% (table 6). Exposure to ads for cigarettes on billboards was highest in Bihar, India (98.6%), and lowest in Montserrat (47.2%). Over 90% of students were exposed to ads for cigarettes on billboards in 14 of the 68 sites (Buenos Aires, Argentina; Santa Cruz, Bolivia; Costa Rica; Monterrey, Mexico; Maldonado, Motevideo, and Rivera, Uruguay; urban Poland; Moscow, Russian Federation; Bihar, Manipur, and West Bengal, India; Jakarta, Indonesia;

Table 6 Media and advertising: Global Youth Tobacco Survey 1999–2001

Country	Saw any anti-smoking media messages (%)	Saw any anti-smoking messages at sporting and other events (%)	Saw any ads for cigarettes on billboards (%)	Saw any ads for cigarettes in newspapers or magazines (%)	Saw any ads for cigarette at sporting and other events (%)	Had an object with a cigarette brand logo on it (%)	Offered free cigarettes by a tobacco company (%)
Overall median	80.4	76.2	78.3	73.0	79.7	16.7	10.6
AFRO							
Ghana 2000	69.0 (4.8)	63.7 (6.8)	52.7 (3.5)	48.7 (5.3)	53.4 (6.3)	16.4 (5.2)	11.0 (2.1)
Malawi							
Blantyre 2001	83.6 (2.7)	76.2 (3.1)	57.7 (9.2)	72.6 (6.8)	57.1 (4.1)	14.9 (2.4)	13.3 (2.5)
Lilongwe 2001	85.7 (2.5)	74.5 (5.0)	55.8 (3.5)	64.0 (3.4)	55.1 (3.8)	16.9 (2.8)	14.4 (2.5)
Nigeria							
Cross River State 2001	65.9 (4.2)	69.9 (4.2)	59.6 (5.7)	51.7(3.6)	56.7 (5.2)	24.7 (2.8)	13.7 (2.9)
South Africa 1999	79.8 (2.8)	77.6 (3.7)	76.4 (4.6)	80.7 (3.9)	78.3 (5.3)	14.5 (3.0)	15.2 (4.4)
Zimbabwe							
Harare 1999	80.7 (3.6)	73.3 (4.9)	76.6 (5.3)	74.7(4.9)	73.1 (5.8)	10.0 (1.7)	8.7 (3.7)
Manicaland 1999	69.7 (6.1)	63.8 (6.6)	64.6 (5.1)	66.7 (4.0)	62.2 (6.2)	13.2 (2.6)	14.5 (3.4)
AMRO/PAHO							
Antigua & Barbuda 2000	77.9 (3.3)	69.6 (2.8)	74.0 (3.0)	58.1 (3.6)	57.0 (3.5)	14.1 (2.4)	10.3 (1.7)
Argentina							
Buenos Aires 2000	63.6 (2.3)	61.4 (3.4)	90.1 (1.9)	89.1 (1.9)	84.1 (2.2)	17.3 (2.1)	8.8 (1.6)
Bahamas 2000	83.1 (3.2)	76.2 (3.2)	64.8 (2.5)	62.4 (3.0)	60.6 (3.1)	14.1 (2.1)	10.8 (1.8)
Barbados 1999	77.2 (2.3)	53.0 (4.3)	69.3 (3.6)	69.1 (3.9)	47.1 (3.9)	14.7 (2.2)	7.3 (1.6)
Bolivia							
Cochabamba 2000	75.9 (2.3)	77.6 (1.2)	88.0 (3.3)	80.2 (2.5)	88.2 (2.0)	17.4 (1.5)	10.8 (1.8)
La Paz 2000	75.6 (2.8)	74.8 (1.9)	88.5 (1.5)	82.0 (2.0)	87.5 (1.6)	18.5 (1.3)	12.5 (1.3)
Santa Cruz 2000	71.6 (3.7)	78.0 (3.4)	90.2 (2.3)	82.3 (3.0)	88.4 (2.4)	21.6 (7.5)	10.8 (1.4)
Chile							
Coquimbo 2000	80.4 (3.9)	76.6 (3.0)	83.7 (2.7)	79.8 (3.2)	79.8 (3.7)	9.4 (1.6)	7.9 (1.2)
Santiago 2000	75.7 (2.3)	71.1 (2.2)	88.8 (2.0)	81.0 (1.8)	80.6 (2.6)	11.5 (1.8)	7.4 (1.0)
Valparaíso—Viña del Mar 2000	81.3 (2.0)	75.1 (5.4)	86.8 (1.6)	77.3 (3.4)	79.7 (2.8)	10.4 (2.1)	9.9 (1.9)
Costa Rica 1999	74.8 (1.3)	49.6 (2.4)	91.9 (1.4)	85.5 (1.7)	100.0 (0.0)	13.1 (1.3)	7.2 (1.0)
Cuba							
Havana 2001	93.2 (1.3)	86.4 (1.8)	66.8 (3.0)	63.1 (3.2)	72.2 (3.2)	13.0 (1.7)	6.5 (1.1)
Dominica 2000	77.0 (2.2)	67.5 (3.6)	NA	57.3 (3.4)	58.7 (3.6)	18.4 (2.7)	9.5 (2.0)
Grenada 2000	73.3 (2.0)	67.4 (2.6)	60.3 (2.3)	53.5 (2.7)	50.7 (2.9)	15.3 (1.8)	11.3 (1.8)
Guyana 2000	82.6 (4.4)	77.3 (4.1)	81.0 (4.0)	81.1 (3.6)	73.8 (4.5)	17.1 (4.3)	11.1 (3.6)
Haiti							
Port-au-Prince 2001	63.5 (3.6)	58.0 (7.8)	61.8 (5.1)	61.7 (6.5)	66.0 (6.4)	19.2 (5.4)	10.6 (3.9)
Jamaica 2001	74.2 (3.0)	65.9 (3.8)	64.7 (4.2)	60.4 (2.8)	57.7 (3.2)	12.7 (2.8)	8.1 (1.5)
Mexico							
Monterrey 2000	87.4 (2.1)	80.7 (2.0)	92.7 (2.0)	87.1 (1.4)	85.0 (2.9)	25.0 (2.0)	11.5 (2.2)
Montserrat 2000	78.4 (9.1)	55.6 (13.4)	47.2 (14.4)	30.4 (9.8)	33.6 (13.4)	12.6 (3.9)	11.0 (4.9)
Peru							
Huancayo 2000	90.0 (1.7)	86.1 (2.4)	70.3 (4.5)	77.1 (3.1)	83.5 (2.6)	12.8 (3.1)	11.3 (2.3)
Lima 2000	89.9 (2.0)	85.7 (2.5)	78.3 (3.3)	84.7 (2.0)	87.0 (2.1)	13.8 (2.5)	9.4 (1.5)
Tarapoto 2000	91.8 (2.9)	86.6 (3.6)	76.6 (2.2)	82.5 (3.1)	84.0 (2.5)	7.4 (2.1)	8.1 (2.0)
Trujillo 2000	92.1 (1.7)	84.3 (2.7)	71.4 (3.1)	77.6 (4.2)	83.0 (2.4)	11.8 (2.8)	9.6 (2.1)
St Lucia 2001	81.7 (3.1)	71.9 (2.1)	64.4 (2.7)	55.0 (4.0)	59.0 (4.1)	17.5 (2.4)	11.2 (2.2)
St Vincent & the Grenadines 2001	78.1 (2.6)	68.6 (5.2)	64.6 (3.6)	59.2 (2.7)	57.7 (3.3)	15.6 (2.6)	7.8 (1.4)
Suriname 2000	74.7 (3.3)	68.7 (4.3)	77.4 (3.5)	76.3 (2.7)	79.6 (4.4)	22.3 (2.7)	11.1 (2.4)
Trinidad & Tobago 2000	77.9 (2.2)	74.3 (2.1)	83.8 (1.9)	80.1 (2.6)	72.4 (2.8)	19.1 (2.1)	10.3 (1.1)
USA 2000	88.6 (0.9)	NA	NA	88.0 (0.8)	NA	21.7 (1.1)	NA
Uruguay							
Colonia 2001	87.1 (3.6)	78.4 (2.9)	88.4 (2.5)	81.4 (4.1)	84.0 (3.9)	17.5 (4.0)	16.7 (4.0)
Maldonado 2001	81.4 (3.5)	75.8 (3.0)	92.5 (1.9)	85.5 (2.5)	86.8 (2.4)	18.7 (3.2)	19.3 (2.9)
Montevideo 2001	84.1 (2.2)	77.0 (2.2)	95.5 (1.3)	88.4 (1.9)	90.0 (1.8)	17.2 (2.7)	21.6 (2.9)
Rivera 2001	90.3 (2.3)	82.8 (3.5)	90.5 (2.1)	82.2 (2.6)	86.0 (2.3)	25.8 (3.3)	19.9 (3.1)
Venezuela 1999	80.3 (2.2)	72.2 (2.6)	80.2 (2.0)	80.4 (2.0)	76.3 (2.5)	14.9 (1.9)	10.2 (1.1)
Virgin Islands (Am.) 2001	79.0 (3.0)	NA	NA	NA	NA	12.1 (2.1)	NA
EMRO							
Gaza Strip and West Bank							
Gaza Strip 2001	71.8 (5.2)	74.8 (5.1)	71.5 (5.4)	66.2 (4.5)	NA	30.2 (5.8)	NA
North West Bank 2001	69.7 (4.1)	70.6 (3.0)	65.6 (5.2)	61.3 (4.1)	NA	32.0 (3.3)	NA
Middle West Bank 2001	74.3 (3.6)	73.2 (3.5)	74.5 (5.2)	68.9 (5.0)	NA	32.8 (4.0)	NA
South West Bank 2001	73.2 (3.0)	72.7 (3.1)	68.8 (4.0)	63.4 (4.1)	NA	34.6 (3.0)	NA
Jordan 1999	80.9 (2.1)	74.8 (3.1)	64.6 (2.5)	59.1 (2.3)	63.0 (3.2)	30.5 (2.5)	24.8 (2.9)
EURO							
Poland							
Urban 1999	86.5 (1.9)	70.3 (3.4)	90.3 (2.0)	91.4 (1.7)	82.3 (2.3)	28.0 (3.0)	48.9 (3.1)
Rural 1999	90.1 (1.6)	73.3 (2.6)	84.2 (2.1)	89.5 (1.7)	79.4 (2.8)	20.4 (1.9)	42.2 (2.6)
Russian Federation							
Moscow 1999	74.8 (1.7)	58.8 (2.7)	94.9 (0.8)	77.0 (1.5)	79.3 (1.5)	22.9 (1.9)	16.7 (1.9)
Ukraine							
Kiev 1999	78.8 (2.0)	74.0 (1.9)	NA	87.8 (1.3)	83.8 (1.6)	25.0 (1.7)	6.6 (1.0)
SEARO							
India							
Assam 2001	72.9 (4.0)	86.3 (3.4)	83.4 (3.6)	68.1 (4.7)	94.7 (1.7)	21.2 (3.9)	10.5 (3.2)
Arunachal Pradesh 2001	70.0 (5.7)	90.3 (1.6)	87.2 (3.7)	60.5 (3.8)	87.6 (3.8)	18.1 (2.3)	11.6 (2.3)
Bihar 2000	97.6 (1.3)	94.7 (3.2)	98.6 (0.8)	96.6 (2.5)	99.0 (0.7)	1.1 (0.8)	0.6 (0.5)

Table 6 continued

Country	Saw any anti-smoking media messages (%)	Saw any anti-smoking messages at sporting and other events (%)	Saw any ads for cigarettes on billboards (%)	Saw any ads for cigarettes in newspapers or magazines (%)	Saw any ads for cigarettes at sporting and other events (%)	Had an object with a cigarette brand logo on it (%)	Offered free cigarettes by a tobacco company (%)
Goa 2000	79.2 (3.6)	80.5 (3.6)	76.6 (2.9)	60.6 (3.9)	76.3 (3.3)	14.1 (2.2)	9.0 (2.0)
Maharashtra 2000	84.8 (3.3)	81.1 (3.4)	85.0 (2.8)	73.0 (3.9)	85.3 (2.8)	12.8 (2.7)	8.7 (2.3)
Manipur 2001	57.7 (7.6)	95.0 (3.4)	91.0 (5.0)	47.2 (5.5)	91.9 (5.7)	20.6 (4.9)	4.5 (2.4)
Meghalay 2001	75.4 (4.1)	93.6 (3.6)	89.7 (4.1)	67.2 (3.7)	91.2 (4.1)	8.9 (2.7)	8.1 (2.3)
Mizoram 2001	82.0 (2.0)	86.2 (3.0)	77.5 (3.6)	46.1 (4.5)	75.4 (3.5)	25.4 (3.0)	13.7 (1.8)
Nagaland 2001	63.1 (7.6)	92.6 (2.4)	81.9 (5.3)	51.3 (5.2)	89.7 (3.6)	15.9 (4.2)	12.1 (3.8)
Sikkim 2001	82.2 (3.0)	90.8 (2.8)	85.8 (5.0)	73.4 (5.8)	91.6 (2.1)	26.1 (7.3)	11.6 (2.2)
Tamil Nadu 2000	74.5 (3.4)	67.0 (3.7)	80.1 (1.9)	61.3 (2.4)	79.4 (2.6)	8.8 (1.7)	3.4 (0.9)
Tripura 2001	71.0 (7.4)	89.8 (5.4)	89.1 (5.1)	67.4 (9.3)	94.2 (1.5)	14.7 (4.2)	7.2 (3.4)
West Bengal 2000	85.3 (1.4)	35.7 (5.3)	90.5 (1.9)	58.5 (3.6)	90.2(2.4)	8.2 (1.4)	6.3 (1.4)
Indonesia							
Jakarta 2000	93.5 (1.3)	93.0 (1.4)	92.4 (1.5)	88.7 (2.1)	93.9 (1.0)	8.4 (1.1)	13.2 (2.2)
Nepal 2001	91.9 (2.7)	89.6 (2.5)	90.6 (2.5)	84.6 (4.8)	91.3 (1.8)	17.4 (4.2)	9.6 (3.3)
Sri Lanka 1999	90.4 (1.7)	85.0 (2.3)	81.0 (2.1)	83.4 (1.9)	84.8 (2.2)	10.5 (1.7)	6.4 (1.1)
WPRO							
China							
Chongqing 1999	82.3 (2.5)	80.5 (2.3)	67.5 (3.7)	44.7 (2.9)	63.9 (3.3)	12.2 (1.6)	7.0 (1.3)
Guangdong 1999	86.6 (1.7)	90.5 (1.2)	75.7 (2.0)	48.6 (2.9)	71.5 (2.9)	18.9 (2.0)	5.3 (1.2)
Shandong 1999	81.4 (2.7)	80.8 (2.5)	50.3 (2.2)	31.6 (2.4)	44.3 (2.3)	7.4 (1.1)	2.5 (1.2)
Tianjin 1999	87.2 (1.6)	84.5 (2.0)	60.4 (4.4)	35.1 (3.8)	48.4 (2.8)	6.7 (1.3)	2.5 (1.1)
Fiji 1999	87.5 (3.7)	83.5 (2.6)	78.3 (3.1)	81.2 (3.7)	84.2 (3.5)	20.5 (2.6)	10.8 (2.5)
Northern Mariana Islands 2000	77.6 (4.3)	NA	NA	NA	NA	23.0 (2.8)	NA
Palau 2000	NA	NA	NA	NA	NA	26.3 (3.2)	NA
Philippines 2000	84.3 (2.3)	87.4 (1.7)	85.6 (2.5)	81.5 (2.4)	85.6 (1.5)	16.3 (1.6)	14.0 (1.5)
Singapore 2000	92.6 (0.8)	90.7 (0.8)	NA	NA	48.2 (1.4)	NA	NA

( ) Data presented as 95% confidence intervals [SE∗1.96].
NA, Not available, question was not asked.

and Nepal). Less than 70% of students were exposed to ads for cigarettes on billboards in 20 of the 68 sites.

The overall median per cent of students who had seen ads for cigarettes in newspapers or magazines during the past 30 days was 73.0% (table 6). The per cent who saw ads for cigarettes in newspapers or magazines was highest in Bihar, India (96.6%), and lowest in Montserrat (30.4%). Over 90% of students saw ads for cigarettes in newspapers or magazines in two sites (urban Poland and Bihar, India). Less than 70% of students were exposed to ads for cigarettes in newspapers or magazines in 33 of the 71 sites.

The overall median per cent of students who saw ads for cigarettes at sporting/other events in the past month was 79.7% (table 6). The per cent of students who saw ads for cigarettes at sporting/other events was highest in Costa Rica (100.0%) and lowest in Montserrat (33.6%). Ninety per cent or more of students saw ads for cigarettes at sporting/other events in 11 sites (Costa Rica; Montevideo, Uruguay; seven states in India; Jakarta, Indonesia; and Nepal). Less than 70% of students saw ads for cigarettes at sporting/other events in 20 of the 67 sites.

Receptivity

Approximately one in six students have "something" with a cigarette brand logo on it (median 16.7%) (table 6). Students in the South West Bank (34.6%) were the most likely to have an item with a cigarette brand logo, and students in Bihar, India (1.1%) were the least likely. Over one in five students had an item with a cigarette brand logo on it in 22 of the 74 sites, and less than 10% of students had an item in nine of the 74 sites. One in 10 students reported they had been offered free cigarettes by a representative of a tobacco company (median 10.6%) (table 6). This practice was most likely in Poland (urban 48.9%, rural 42.2%) and Jordan (24.8%), and least likely in Bihar, India (0.6%). Over 15% of the students had been offered free cigarettes in nine of the 66 sites.

Environmental tobacco smoke

Exposure in the home

Students were asked two questions regarding their exposure to second hand smoke (table 7). Almost half of the students reported that they were exposed to second hand smoke from others in their home (median 48.9%) (table 7). Students in Meghalay, India (79.8%) had the highest exposure and students in Lilongwe, Malawi (16.0%) the lowest. Over 70% of students were exposed to others smoking in their home in six sites, all in India. Less than 40% of the students were exposed to others smoking at their home in 31 of the 75 sites.

Exposure in public places

Overall, six in 10 students were exposed to cigarette smoking from others in public places (median: 60.9%) (table 7). Students in Buenos Aires, Argentina (86.7%) had the highest exposure, and students in Blantyre, Malawi (30.4%) the lowest. Over 70% of students were exposed to cigarette smoking from others in public places in 18 of the 75 sites, including those in South America, India, Eastern Europe, and the Pacific Islands. Less than 40% of the students were exposed to smoking from others in public places in only six sites (Blantyre and Lilongwe, Malawi; Huancayo and Tarapoto, Peru; Virgin Islands (Am.); and Goa, India).

Attitudes toward second hand smoke

Students were asked two questions regarding their attitudes toward second hand smoke. Overall, three fourths of students thought smoking should be banned from public places (median 74.9%) (table 7). The highest per cent of students desiring a ban on smoking in public places was found in Sri Lanka (91.4%), and the lowest in Manipur, India (31.4%). Over 80% thought smoking should be banned from public places in 25 of the 70 sites. Less than 40% of the students thought smoking should be banned in public places in only four sites (Manicaland, Zimbabwe; Manipur, Nagaland, and Sikkim states in India).

Table 7 Environmental tobacco smoke—percentage of students age 13–15 years by exposure to tobacco in home and other places: Global Youth Tobacco Survey 1999–2001

Country	Exposed to smoke from others in their home (%)	Exposed to smoke from others in public places (%)	Think smoking should be banned from public places (%)	Definitely think smoke from others is harmful to them (%)
Overall median	48.9	60.9	74.9	65.5
AFRO				
Ghana 2000	22.2 (3.8)	41.5 (4.5)	58.2 (8.8)	41.6 (9.7)
Malawi				
Blantyre 2001	19.0 (4.5)	30.4 (7.1)	90.1 (3.0)	83.1 (3.6)
Lilongwe 2001	16.0 (2.3)	35.5 (2.1)	85.1 (6.8)	81.8 (6.1)
Nigeria				
Cross River State 2001	34.3 (5.1)	49.6 (5.5)	60.2 (4.6)	35.4 (5.9)
South Africa 1999	43.6 (4.6)	56.1 (8.0)	53.4 (9.1)	57.3 (7.5)
Zimbabwe				
Harare 1999	36.2 (5.0)	62.4 (5.0)	43.2 (11.1)	45.3 (6.2)
Manicaland 1999	35.0 (6.0)	51.6 (6.4)	31.6 (8.1)	31.0 (6.3)
AMRO/PAHO				
Antigua & Barbuda 2000	17.4 (2.7)	46.2 (3.5)	73.2 (4.1)	66.4 (4.1)
Argentina				
Buenos Aires 2000	68.2 (2.9)	86.7 (2.4)	70.4 (3.2)	66.3 (2.8)
Bahamas 2000	28.7 (3.4)	51.2 (3.6)	64.5 (5.0)	64.8 (4.0)
Barbados 1999	22.5 (4.8)	51.3 (3.9)	79.4 (2.6)	63.7 (4.1)
Bolivia				
Cochabamba 2000	43.3 (3.1)	60.9 (2.4)	80.1 (1.8)	69.4 (1.5)
La Paz 2000	39.8 (2.7)	60.6 (2.7)	80.9 (1.9)	61.1 (2.8)
Santa Cruz 2000	55.8 (5.5)	65.3 (4.2)	81.2 (1.6)	65.5 (3.1)
Chile				
Coquimbo 2000	53.8 (2.7)	68.4 (5.0)	74.6 (4.6)	59.1 (3.2)
Santiago 2000	61.3 (3.3)	72.2 (3.2)	71.5 (3.5)	60.7 (3.3)
Valparaíso—Viña del Mar 2000	57.3 (4.8)	67.9 (3.8)	76.4 (3.5)	60.4 (4.0)
Costa Rica 1999	32.8 (1.7)	55.7 (2.1)	84.2 (1.8)	73.5 (1.9)
Cuba				
Havana 2001	68.9 (2.7)	67.0 (2.1)	80.7 (3.3)	62.9 (4.2)
Dominica 2000	27.4 (3.8)	56.9 (4.0)	74.3 (3.1)	72.1 (3.6)
Grenada 2000	28.9 (2.3)	54.2 (2.5)	74.9 (2.8)	71.7 (3.6)
Guyana 2000	31.6 (4.0)	61.0 (4.8)	76.1 (7.6)	67.3 (8.6)
Haiti				
Port-au-Prince 2001	31.3 (7.8)	51.8 (5.2)	74.9 (6.2)	57.2 (7.3)
Jamaica 2001	30.7 (3.2)	59.2 (3.5)	70.6 (7.6)	68.1 (4.1)
Mexico				
Monterrey 2000	45.5 (3.2)	58.0 (3.4)	77.6 (2.8)	66.7 (3.1)
Montserrat 2000	18.1 (7.2)	43.4 (8.7)	88.3 (6.4)	71.3 (6.5)
Peru				
Huancayo 2000	23.7 (2.9)	34.5 (4.5)	89.3 (2.5)	50.1 (3.3)
Lima 2000	30.9 (3.0)	44.4 (3.5)	88.2 (2.4)	56.0 (2.9)
Tarapato 2000	33.0 (2.6)	39.5 (3.5)	90.5 (2.9)	58.1 (4.3)
Trujillo 2000	27.8 (2.5)	40.3 (3.8)	89.8 (2.6)	61.4 (3.7)
St Lucia 2001	26.9 (2.5)	58.1 (3.5)	79.5 (3.8)	76.7 (3.4)
St Vincent & the Grenadines 2001	32.5 (2.9)	64.1 (3.4)	70.5 (3.8)	68.1 (3.5)
Suriname 2000	56.6 (3.9)	67.8 (3.8)	87.6 (1.8)	59.2 (5.1)
Trinidad & Tobago 2000	37.2 (2.5)	68.7 (2.3)	84.7 (2.0)	68.9 (2.9)
USA 2000	42.1 (2.1)	69.7 (1.8)	NA	90.8 (0.9)
Uruguay				
Colonia 2001	58.3 (4.1)	72.1 (4.1)	79.5 (6.4)	72.1 (6.0)
Maldonado 2001	64.2 (3.6)	79.3 (3.9)	76.3 (4.2)	71.5 (3.9)
Montevideo 2001	64.6 (2.8)	82.2 (2.3)	72.6 (2.8)	65.0 (3.3)
Rivera 2001	67.1 (3.1)	80.8 (3.1)	81.9 (3.1)	69.2 (4.1)
Venezuela 1999	43.5 (2.2)	47.8 (2.9)	87.3 (1.5)	64.6 (2.4)
Virgin Islands (Am.) 2001	20.1 (2.7)	37.5 (3.0)	NA	73.0 (3.4)
EMRO				
Gaza Strip and West Bank				
Gaza Strip 2001	50.9 (3.2)	47.1 (3.2)	85.4 (2.1)	87.0 (2.5)
North West Bank 2001	66.3 (4.0)	57.8 (7.4)	82.8 (3.8)	85.2 (4.8)
Middle West Bank 2001	66.2 (3.0)	62.5 (5.3)	81.8 (3.1)	80.8 (3.3)
South West Bank 2001	67.7 (3.8)	60.5 (4.8)	82.6 (2.4)	83.3 (2.2)
Jordan 1999	67.4 (2.4)	61.3 (2.9)	78.3 (2.1)	75.0 (2.3)
EURO				
Poland				
Urban 1999	66.3 (2.6)	69.9 (3.3)	79.1 (2.5)	66.2 (3.4)
Rural 1999	68.4 (2.9)	62.1 (2.7)	86.5 (1.9)	63.7 (3.0)
Russian Federation				
Moscow 1999	55.3 (2.2)	72.5 (2.1)	71.0 (2.1)	51.0 (2.6)
Ukraine				
Kiev 1999	49.0 (2.4)	71.8 (1.8)	66.9 (2.7)	49.4 (2.6)
SEARO				
India				
Assam 2001	59.4 (5.5)	62.2 (4.7)	61.7 (4.4)	44.1 (5.2)
Arunachal Pradesh 2001	69.0 (3.9)	78.5 (4.5)	42.8 (4.6)	41.4 (6.2)
Bihar 2000	28.2 (5.4)	49.3 (6.3)	73.7 (5.0)	58.9 (5.1)
Goa 2000	20.4 (3.6)	34.8 (4.8)	66.0 (7.4)	62.3 (5.3)

Table 7 continued

Country	Exposed to smoke from others in their home (%)	Exposed to smoke from others in public places (%)	Think smoking should be banned from public places (%)	Definitely think smoke from others is harmful to them (%)
Maharashtra 2000	29.5 (3.6)	41.1 (4.3)	90.9 (1.9)	63.3 (3.5)
Manipur 2001	79.0 (10.9)	82.9 (9.9)	31.4 (7.3)	22.8 (9.8)
Meghalay 2001	79.8 (8.3)	84.4 (6.1)	52.6 (8.8)	47.5 (8.5)
Mizoram 2001	74.8 (4.6)	78.2 (4.0)	68.8 (3.5)	54.4 (4.9)
Nagaland 2001	78.4 (5.4)	81.8 (5.5)	33.2 (4.3)	26.6 (3.6)
Sikkim 2001	72.2 (3.5)	77.2 (2.6)	38.3 (4.5)	29.7 (5.2)
Tamil Nadu 2000	32.9 (2.8)	51.7 (3.3)	72.5 (3.0)	81.7 (1.8)
Tripura 2001	79.1 (7.6)	81.6 (6.3)	61.2 (9.0)	48.2 (12.2)
West Bengal 2000	59.3 (3.6)	69.2 (3.7)	84.6 (2.5)	87.1 (2.3)
Indonesia				
Jakarta 2000	69.3 (3.4)	83.5 (2.8)	88.9 (2.2)	57.4 (3.3)
Nepal 2001	35.7 (3.7)	46.5 (5.5)	72.6 (4.0)	79.9 (3.9)
Sri Lanka 1999	55.9 (3.4)	67.9 (3.3)	91.4 (2.4)	74.7 (2.5)
WPRO				
China				
Chongqing 1999	56.8 (3.7)	59.6 (3.2)	55.7 (2.7)	81.3 (1.6)
Guangdong 1999	49.4 (2.8)	48.4 (2.8)	64.3 (2.1)	80.2 (1.7)
Shandong 1999	48.9 (3.8)	42.9 (2.7)	63.1 (2.1)	79.6 (2.6)
Tianjin 1999	59.1 (3.1)	52.6 (3.2)	68.7 (2.3)	81.4 (1.8)
Fiji 1999	49.4 (4.8)	68.6 (3.4)	54.0 (8.2)	57.2 (5.4)
Northern Mariana Islands 2000	64.9 (3.7)	80.2 (4.5)	NA	70.6 (4.1)
Palau 2000	46.0 (3.7)	49.1 (3.9)	NA	78.6 (3.6)
Philippines 2000	58.2 (2.2)	74.6 (2.1)	40.4 (5.1)	45.0 (5.1)
Singapore 2000	35.1 (1.5)	65.1 (1.3)	NA	78.1 (1.3)

( ) Data presented as 95% confidence intervals [SE*1.96].
NA, Not available, question was not asked.

Overall, almost two thirds of the students "definitely" thought that smoke from others is harmful to them (median 65.5%) (table 7). The highest per cent was in the USA (90.8%), and the lowest in Manipur, India (22.8%). Over 80% of students "definitely" thought that smoke from others is harmful to them in 12 sites (Blantyre and Lilongwe, Malawi; USA; Gaza Strip, North, Middle, and South West Bank; Tamil Nadu and West Bengal, India; and Chongqing, Guangdong, and Tianjin, China). Less than 40% of students "definitely" thought smoke from others is harmful to them in five sites (Cross River, Nigeria; Manicaland, Zimbabwe; and Manipur, Nagaland, and Sikkim states in India).

School curriculum

Students were asked a series of questions about what they had been taught during the past school year concerning the harmful effects of tobacco. Overall, the median per cent of students who reported having been taught in school about the dangers of tobacco use was 50.8% (table 8). Students in Guangdong, China (83.0%) were the most likely to have been taught about the dangers of tobacco, and students in Bihar, India (2.7%) the least. Over 60% of the students had been taught about the dangers of tobacco in 15 of the 70 sites. Less than 30% of the students had been taught about the dangers of tobacco in nine sites (Santiago, Chile; and eight states in India).

Students were also asked if they had discussed, in their classes, the reasons why children their age smoke (median 34.4%) (table 8). Students in Jakarta, Indonesia (63.0%) were the most likely to have had these discussions, and students in Bihar, India (1.8%) the least. Only Jakarta, Indonesia had a rate above 60%, whereas 26 sites had rates less than 30%.

DISCUSSION

The GYTS has, for the first time, documented a serious problem in youth tobacco use that is global in nature. The problem is of equal concern in developed and developing countries. Among the 75 sites in 43 countries and the Gaza Strip/West Bank region presented in this report, not a single site had a prevalence rate of current "any tobacco use", "cigarette smoking", or "other tobacco use" equal to zero. Thus, from the world population of 6.2 billion people††, 186 million are estimated to be age 13–15 years and currently in school. Further, of the 186 million, an estimated 34.8 million are currently using some form of tobacco and 25.8 million are currently smoking cigarettes. The use of any form of tobacco by 13–15 year old students was greater than 10% in all but nine sites. In addition, almost one in four students who ever smoked cigarettes smoked their first cigarette before the age of 10. Thus, future health consequences of tobacco use and dependency on tobacco appear to be a significant problem facing countries throughout the world. These findings suggest that immediate attention needs to be given to the development of both global and country specific tobacco control programmes.

In addition to providing essential information for the participating governmental jurisdictions, the GYTS data also allow for the identification of important differences among sites. For example, there is an extremely wide range in responses to virtually all questions on tobacco use, with 10- and 20-fold differences between the sites with the highest and lowest rates of tobacco use common. Of particular interest is India, a country of over one billion people, which had both the highest and lowest rates for current use of any tobacco product (62.8% in Nagaland, India and 3.3% in Goa, India). These wide variations in responses within a country underscore the importance of subnational data, and how national estimates can obscure important within country differences.

Asking questions in a standardised manner also allows for comparisons among countries, revealing patterns and suggesting questions that might not otherwise be apparent. For example, in some of the Indian sites with low "ever smoking rates" of under 25% (for example, Assam, Manipur, Sikkim, and Tripura) nearly all of the students (over 80%) that have smoked, smoked their first cigarette before the age of 10.

††Population estimates are from *The World Gazetteer*: www.gazetteer.de. The estimate of 3% of the population being aged 13–15 years and in school was derived from the population counts from *The World Gazetteer* and school enrollment counts for each of the 73 sites in this paper.

Table 8 School curriculum—percentage of students age 13–15 years who were taught about tobacco in class during the past school year: Global Youth Tobacco Survey 1999–2001

Country	Taught dangers of smoking in class (%)	Discussed reasons why people their age smoke in class (%)
Overall median	50.8	34.4
AFRO		
Ghana 2000	57.7 (7.0)	32.1 (5.0)
Malawi		
Blantyre 2001	68.7 (5.2)	44.5 (8.3)
Lilongwe 2001	68.9 (2.5)	50.7 (4.1)
Nigeria		
Cross River State 2001	42.1 (4.8)	28.7 (3.0)
South Africa 1999	38.7 (4.8)	29.4 (4.3)
Zimbabwe		
Harare 1999	34.1 (5.9)	26.7 (5.7)
Manicaland 1999	51.6 (5.7)	34.9 (5.5)
AMRO/PAHO		
Antigua & Barbuda 2000	42.4 (3.4)	29.4 (3.4)
Argentina		
Buenos Aires 2000	37.4 (7.0)	26.4 (6.9)
Bahamas 2000	52.4 (6.1)	37.7 (5.2)
Barbados 1999	32.0 (8.7)	22.8 (4.6)
Bolivia		
Cochabamba 2000	50.8 (5.7)	30.3 (4.7)
La Paz 2000	50.6 (4.2)	26.7 (2.0)
Santa Cruz 2000	59.0 (4.9)	32.4 (7.2)
Chile		
Coquimbo 2000	30.2 (5.8)	27.0 (5.7)
Santiago 2000	22.5 (4.2)	17.1 (3.4)
Valparaíso—Viña del Mar 2000	32.3 (7.6)	25.9 (6.1)
Costa Rica 1999	39.4 (3.8)	32.9 (3.1)
Cuba		
Havana 2001	68.4 (4.5)	53.2 (4.1)
Dominica 2000	57.8 (5.6)	41.2 (4.4)
Grenada 2000	50.4 (3.7)	34.4 (3.4)
Guyana 2000	45.5 (7.6)	31.0 (4.7)
Haiti		
Port-au-Prince 2001	54.2 (11.4)	22.3 (4.9)
Jamaica 2001	40.4 (6.2)	26.7 (5.1)
Mexico		
Monterrey 2000	58.8 (5.2)	50.7 (5.7)
Montserrat 2000	66.4 (15.7)	46.1 (17.7)
Peru		
Huancayo 2000	47.1 (3.8)	44.9 (5.4)
Lima 2000	42.6 (6.0)	33.9 (4.3)
Tarapoto 2000	67.1 (6.6)	52.4 (5.6)
Trujillo 2000	58.0 (4.9)	49.3 (4.4)
St. Lucia 2001	54.1 (5.1)	39.1 (5.3)
St. Vincent & the Grenadines 2001	58.9 (5.0)	43.7 (4.9)
Suriname 2000	45.3 (4.9)	44.9 (4.6)
Trinidad & Tobago 2000	44.3 (5.3)	30.8 (3.8)
USA 2000	NA	48.6 (3.1)
Uruguay		
Colonia 2001	36.8 (8.6)	24.5 (6.4)
Maldonado 2001	42.0 (6.1)	27.6 (4.9)
Montevideo 2001	33.9 (3.9)	26.3 (4.1)
Rivera 2001	50.9 (5.4)	36.3 (5.6)
Venezuela 1999	42.1 (5.0)	30.3 (2.7)
Virgin Islands (Am.) 2001	NA	NA
EMRO		
Gaza Strip and West Bank		
Gaza Strip 2001	74.5 (5.1)	55.4 (7.4)
North West Bank 2001	50.6 (5.8)	34.6 (4.6)
Middle West Bank 2001	52.7 (7.5)	38.0 (8.4)
South West Bank 2001	57.0 (3.8)	42.0 (3.5)
Jordan 1999	52.5 (3.9)	49.2 (2.8)
EURO		
Poland		
Urban 1999	48.7 (4.6)	42.7 (3.8)
Rural 1999	53.8 (3.8)	44.9 (3.1)
Russian Federation		
Moscow 1999	35.6 (4.0)	23.0 (2.6)
Ukraine		
Kiev 1999	54.4 (5.1)	37.8 (4.8)
SEARO		
India		
Assam 2001	24.5 (5.0)	18.3 (3.9)
Arunachal Pradesh 2001	24.2 (6.1)	22.1 (4.5)
Bihar 2000	2.7 (1.9)	1.8 (1.5)
Goa 2000	50.7 (3.8)	34.0 (2.8)

Table 8 continued

Country	Taught dangers of smoking in class (%)	Discussed reasons why people their age smoke in class (%)
Maharashtra 2000	66.8 (3.5)	49.1 (4.0)
Manipur 2001	14.9 (8.4)	12.5 (6.9)
Meghalay 2001	28.2 (11.0)	23.4 (8.2)
Mizoram 2001	57.5 (4.4)	29.1 (2.8)
Nagaland 2001	21.3 (5.0)	18.6 (4.8)
Sikkim 2001	20.8 (4.1)	20.9 (2.5)
Tamil Nadu 2000	52.4 (3.3)	29.8 (2.8)
Tripura 2001	14.7 (4.4)	12.2 (4.5)
West Bengal 2000	49.4 (2.6)	47.9 (3.9)
Indonesia		
Jakarta 2000	68.5 (4.4)	63.0 (4.7)
Nepal 2001	77.7 (4.9)	50.9 (5.4)
Sri Lanka 1999	62.7 (3.2)	34.5 (2.7)
WPRO		
China		
Chongqing 1999	78.6 (2.8)	39.8 (3.4)
Guangdong 1999	83.0 (3.1)	35.5 (2.7)
Shandong 1999	71.7 (2.6)	35.5 (3.4)
Tianjin 1999	75.9 (3.4)	35.4 (2.9)
Fiji 1999	64.1 (5.7)	44.8 (5.6)
Northern Mariana Islands 2000	NA	NA
Palau 2000	NA	NA
Philippines 2000	59.7 (3.4)	58.9 (2.9)
Singapore 2000	NA	NA

( ) Data presented as 95% confidence intervals [SE*1.96].
NA, Not available, question was not asked.

This contrasts dramatically with countries with higher "ever smoking rates" of over 60% (for example, Chile, Poland, Russian Federation, Ukraine, Northern Mariana Islands, and Palau), but have less than one third of students that have smoked, having smoked their first cigarette before the age of 10. What is it that makes children in some parts of the world less likely to smoke, but those that do, start at an earlier age? These and other data from the GYTS should serve to guide and stimulate additional research.

In many ways the GYTS has raised as many questions as it has answered. For example, while Moscow in the Russian Federation had among the highest rates of current cigarette smoking (33.4%), students in Moscow were the least likely to smoke at home (4.8%). Of additional interest is the fact that students tended to believe that smoking provided more social benefits to boys than to girls. For instance, 28% of students thought boys who smoke have more friends, compared to 16.8% who feel that girls who smoke have more friends. Similarly, students were more likely to think that smoking made boys look more attractive than girls (13.5% *v* 10.0%, respectively). Further research is needed to better understand these observations.

Implications for action

The GYTS data document that in many parts of the world a serious problem of youth tobacco use already exists, and these data also provide insight into ways to shape a public health response. Because of the deadly and addicting nature of tobacco products, and the prevalence of its use among young people, it is clear that we need to change the way in which society views tobacco products and to begin to treat these products commensurate with the harm that they cause.

Specifically, the GYTS data demonstrate that in almost every site and every media, the majority of students had seen cigarette advertisements. Also, in many countries students are offered free cigarettes by tobacco company representatives at social and sporting events and 17% of the students owned an object with a cigarette brand logo on it. While cigarette advertisements are not the only factor influencing young people to smoke, there is abundant evidence that cigarette promotion and marketing efforts influence adolescent smoking behaviour, often to a greater extent than it influences the behaviour of adults.[15] Given the addictiveness of tobacco products and the magnitude of harm they cause, as well as the susceptibility of young people to sophisticated tobacco advertising strategies, severe restrictions on the marketing of tobacco products are prudent public health actions.

The GYTS data show that a vast majority of students are exposed to second hand smoke in public places, and substantial proportions are exposed to tobacco in their homes. Generally, the majority of students knew that tobacco smoke from others smoking was harmful to them, and the vast majority stated that smoking should be banned from public places. These findings reinforce the need for laws which protect children from exposure to second hand smoke.

Survey results indicate that a large percentage, generally a majority of current smokers, have purchased their cigarettes from a store. A vast majority of 13–15 year old current smokers who tried purchasing cigarettes from a store were not refused the purchase because of their age. Thus, there is a need for strong laws prohibiting the sale of tobacco products to minors, and these laws must be enforced.

The GYTS data show that over two thirds of current smokers want to stop smoking. This strongly suggests the need for effective youth cessation programmes. The GYTS data on school education programmes suggest the need for development and implementation of effective tobacco prevention curricula in schools throughout the world.

Limitations

The findings in this report are subject to at least three limitations. First, these data apply only to youth age 13–15 years who attended school and, therefore, are not representative of all persons in this age group. However, in most countries, the majority of young people age 13–15 years attended regular, private, or technical schools. Data on secondary school enrolment are available for 34 of the countries included in this paper.[16] These countries have an average secondary school enrolment ratio of 64, compared to 54 for the world. Second, these data apply only to youth who were in school on the day of survey administration. The median student response rate was 86.8%, and only five of the 75 sites had a student response rate less than 80%. Third, the data are all based on self reports, possibly leading to under or over reporting of behaviour.

Although the extent of this under or over reporting of behaviour cannot be determined, some GYTS questions have been analysed and demonstrated good test–retest reliability.[17] As GYTS expands to more countries, it is hoped that there will be more opportunity to compare GYTS findings with findings from other youth health surveys, particularly those that are conducted in multiple countries, such as the HBSC in Europe.

Conclusions

At the beginning of the 21st century, tobacco use among young people is already well established in many parts of the world. Nearly 20% of 13–15 year olds use some type of tobacco product, and among those who smoke cigarettes, nearly 25% smoked their first cigarette before the age of 10 years.

The determinants of youth tobacco use are many and varied. Cultural and religious norms, availability of different types of tobacco products, tobacco control strategies, and, perhaps most importantly, tobacco industry behaviour to promote tobacco use and undercut tobacco control strategies are determining factors. While we do not fully understand all the factors that contribute to the decision to use tobacco, which quickly leads to addiction and eventual adverse health outcomes, we do need to understand better the patterns of use, how the determinants of use interact, and how they differ among countries and cultures.

Systematic global surveillance of youth tobacco use is the essential first step in attempting to prevent the projected epidemic of death and disease that smoking will cause in the 21st century. The GYTS was developed to enhance the capacity of countries to design, develop, implement, and evaluate their tobacco prevention and control programmes. The GYTS provides data which can be used by countries to: (1) evaluate their country specific tobacco control programme; (2) monitor trends in global youth tobacco use; and (3) compare tobacco use among countries and regions.

This paper presents the basic results from 75 GYTS locations (43 countries and the Gaza Strip/West Bank region), with the major goal of making the information available, in a cross country comparison format, to tobacco control programme and policy makers throughout the world. Additional manuscripts are being prepared on sex differences in youth tobacco use, cigarette brand preference, and a multivariate analysis on the differences in tobacco use. Additional research needs to be conducted on country specific comparisons between youth and adult tobacco use rates, estimates of the incidence of initiation in order to determine the direction of tobacco use trends, and evaluation studies in sites that have conducted multiple surveys over time to assess secular trends, as well as the effectiveness of intervention programmes. Country specific data from the GYTS is available at: http://www.cdc.gov/tobacco/global/gyts/GYTS_factsheets.htm.

ACKNOWLEDGEMENT

The GYTS Collaborative Group would like to thank the contribution of the following people who wrote this report: Samira Asma, Curtis Blanton, Michael P Eriksen, Ricardo Granero, Prakash Gupta, Leanne Riley, Charles W Warren, and Leah Zinner.

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